TOXNET

Toxicology and Environmental Health Information

from the National Library of Medicine (NLM)

and Other Sites

June 2005

Presented by

NLM's Toxicology and Environmental Health Information Program

part of the Division of Specialized Information Services

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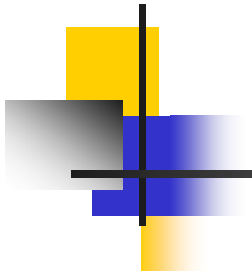
Class Schedule

Part I	Introduction	9:00 - 9:15
Part II	ChemIDplus	9:15 - 9:45
	Exercises (II)	9:45 -10:15
	Break	10:15 -10:30
Part III	TOXNET Overview, HSDB & Related Files	10:30 -11:30
	Exercises (III)	11:30 -12:00
	Lunch	12:00 - 1:00
Part IV	TOXLINE and Other Bibliographic Files	1:00 - 1:30
Part V	TRI, Specialty Files, New Initiatives	1:30 - 2:15
	Exercises (IV, V)	2:15 - 2:45
	Break	2:45 - 3:00
Part VI	Non-NLM Resources	3:00 - 3:30
	Exercises (VI)	3:30 - 4:00



Class Roster

Part I

Introduction

Toxicology and Environmental Health Information Program (TEHIP)

Background

- Poisons recognized throughout time.
- Socrates - hemlock. Cleopatra - asp.
- Lucretia Borgia
- Harvey W. Wiley's Poison Squad – 1903
- The Jungle (1906) Upton Sinclair – lack of hygiene in the meat-packing industry
- Food and Drugs Act (1906) – prohibited adulterated or misbranded items
- Federal Food, Drug and Cosmetic Act (1938) – enhanced safety requirements for drugs
- Drug Amendments (1962) – effectiveness required for drugs
- Silent Spring (1962) Rachel Carson – sparked public awareness about hazards of synthetic chemicals
- President's Science Advisory Committee (1966) – "Report on the Handling of Toxicological Information"
- TEHIP Created (1967)
- Situated within NLM's Division of Specialized Information Services

TEHIP Mission

- Provide selected core toxicology and environmental health information resources and services
- Facilitate access to national and international toxicology and environmental health information resources
- Strengthen the information infrastructure of toxicology and environmental health

So…TEHIP

- Builds and/or makes available free online Web-based databases
- Creates other Web-based resources
- Collaborates with government agencies and others
- Addresses a spectrum of user needs, from the personal to the professional
- Is active in public training and outreach

TEHIP Databases

- TOXNET System of Databases (including ChemIDplus and Specialty Databases)
- DIRLINE (directory of organizations)

Additional TEHIP Resources

- Special Topic Guides – arsenic, biological & chemical warfare agents, etc.
- Publications (including Glossary of Terms Used in Toxicology)
- ALTBIB - Alternatives Bibliography
- Toxicology Tutor

Other Relevant NLM Information

- PubMed/MEDLINE
- MedlinePlus (consumer health, includes drug information)
- Clinical Trials
- NLM Gateway – Multi-File Searching – Planned to go across all NLM Files

United States
National Library of Medicine
National Institutes of Health

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The Specialized Information Services (SIS) Division of the National Library of Medicine (NLM) is responsible for information resources and services in toxicology, environmental health, chemistry, HIV/AIDS, and specialized topics in minority health.

Environmental Health & Toxicology

Databases and other resources related to toxicology and environmental health
Features TOXNET

Chemical Information

Databases and other resources designed to help search for information by chemical name or structure
Features ChemIDplus: Lite and Advanced

HIV/AIDS

Links to journal literature, clinical trials and treatment information, meeting abstracts, and other scientific and consumer-related resources

Outreach Activities & Resources

Programs, resources and web sites for minority and other specific populations

Directory of Health Organizations

Features DIRLINE and Health Hotlines

More to Explore

SIS News
Staff Directory
Fact Sheets
WISER
TOXMAP

Additional NLM Sites

MEDLINE/PubMed®
Search journal literature

MedlinePlus®
Consumer health information

NLM Gateway
Search multiple NLM databases

Bookshelf
Search selected biomedical books

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Environmental Health and Toxicology

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Environmental Health and Toxicology

Topics

- Chemicals and Drugs
- Diseases and the Environment
- Environmental Health
- Occupational Safety and Health
- Poison Control
- Risk Assessment and Regulations
- Toxicology

Especially for

- The Public
- Researchers/Scientists
- Health Professionals
- Students/Educators
- Emergency Responders

Reference Tools

A to Z List of Resources
Database Manual
News
Calendar of Events

Listservs:

NLM-TOX-ENVIRO-HEALTH-L
WISER - Wireless Information System for Emergency Responders
MedlinePlus® Environmental Health e-mail Announcement List

More Chemical Information
Publications and Reference Materials
List of NLM Databases and Resources

More to Explore

Tox Town
Enviro-Health Links
WISER
Toxicology Tutorials
Toxicology Web Links
Education and Career Links
Fact Sheets
Database Descriptions
MedlinePlus: Consumer Environmental Health Information
DIRLINE®
Public Health Information
Bookshelf

TOXNET®

Collection of databases on hazardous chemicals, toxic releases, and environmental health

Search TOXNET for:

Search

Search a single database:

ChemIDplus
CCRIS
DART
GENE-TOX
Haz-Map
Household Products
HSDB
IRIS
ITER
TOXLINE
TOXMAP
TRI

TOXNET FAQs

Featured Site

Featured Site: New Enviro-Health Links resource on Indoor Air Pollution

National Institute of Environmental Health Sciences: The primary NIH organization for environmental health research

United States
National Library of Medicine
National Institutes of Health

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Directory of Heath Organizations

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DIRLINE®

Searching DIRLINE

drinking water

Search Clear

Search: all of the words any of the words exact phrase

Fields: (if none checked, all fields will be searched.)

- Organization name or acronym
- MeSH Headings/Keywords

Select records containing:

- Only organizations with toll-free numbers
- Only organizations with services for the hearing impaired

Search Browse the Index

Health Hotlines

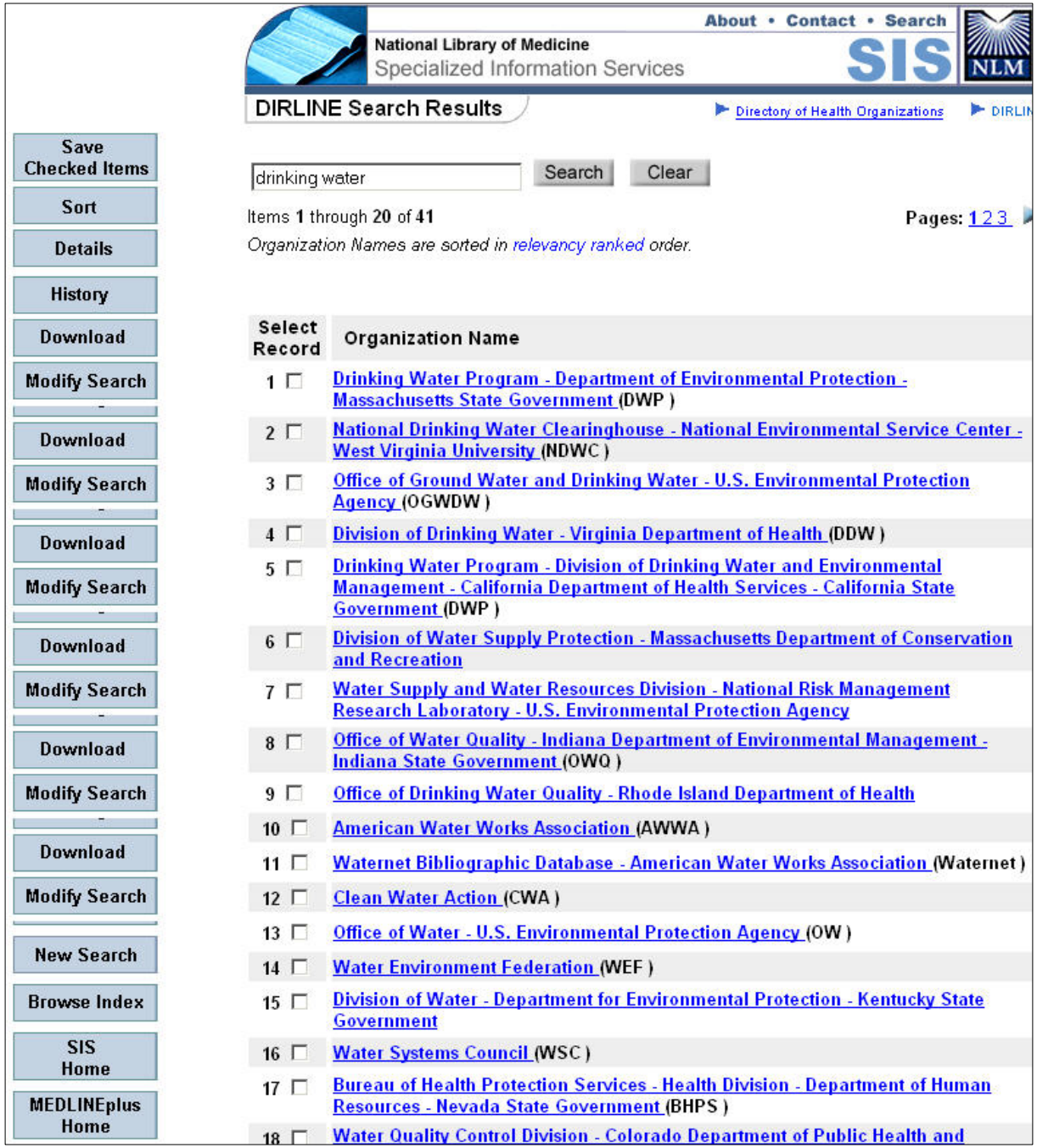
Toll-free numbers for over 300 organizations

Other NLM Resources

MEDLINEplus®
PubMed
NLM Gateway
Locatorplus

Support Pages

Help
Fact Sheet
Disclaimer
Suggestion Form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NLM
DIRLINE Search Results
Directory of Health Organizations
DIRLIN
Save Checked Items
Sort
Details
History
Download
Modify Search
Download
Modify Search
Download
Modify Search
Download
Modify Search
Download
Modify Search
Download
Modify Search
New Search
Browse Index
SIS Home
MEDLINEplus Home
drinking water
Search
Clear
Items 1 through 20 of 41
Pages: 1 2 3
Organization Names are sorted in relevancy ranked order.
Select Record
Organization Name
1 Drinking Water Program - Department of Environmental Protection - Massachusetts State Government (DWP)
2 National Drinking Water Clearinghouse - National Environmental Service Center - West Virginia University (NDWC)
3 Office of Ground Water and Drinking Water - U.S. Environmental Protection Agency (OGWDW)
4 Division of Drinking Water - Virginia Department of Health (DDW)
5 Drinking Water Program - Division of Drinking Water and Environmental Management - California Department of Health Services - California State Government (DWP)
6 Division of Water Supply Protection - Massachusetts Department of Conservation and Recreation
7 Water Supply and Water Resources Division - National Risk Management Research Laboratory - U.S. Environmental Protection Agency
8 Office of Water Quality - Indiana Department of Environmental Management - Indiana State Government (OWQ)
9 Office of Drinking Water Quality - Rhode Island Department of Health
10 American Water Works Association (AWWA)
11 Waternet Bibliographic Database - American Water Works Association (Waternet)
12 Clean Water Action (CWA)
13 Office of Water - U.S. Environmental Protection Agency (OW)
14 Water Environment Federation (WEF)
15 Division of Water - Department for Environmental Protection - Kentucky State Government
16 Water Systems Council (WSC)
17 Bureau of Health Protection Services - Health Division - Department of Human Resources - Nevada State Government (BHPS)
18 Water Quality Control Division - Colorado Department of Public Health and

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Trusted Health Information for You

A service of the U.S. NATIONAL LIBRARY OF MEDICINE
and the NATIONAL INSTITUTES OF HEALTH

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Poisoning, Toxicology, Environmental Health Topics

- Air Pollution
- Anthrax
- Arsenic
- Asbestos
- Asbestosis see Asbestos

- Biodefense and Bioterrorism
- Biological Weapons see Biodefense and Bioterrorism
- Bioterrorism see Biodefense and Bioterrorism
- Campylobacter see Food Contamination and Poisoning
- Carbon Monoxide Poisoning

- Cell Phones see Electromagnetic Fields
- Chemical Weapons
- Cleaning Products see Household Poisons
- Drinking Water
- EMF see Electromagnetic Fields

- Electromagnetic Fields
- Environmental Health

ClinicalTrials.gov

A service of the U.S. National Institutes of Health

Linking patients to medical research

Developed by the National Library of Medicine

Home | Search | Browse | Resources | Help | What's New | About

Browse : By Condition : By Disease Heading : **Injuries, Poisonings, and Occupational Diseases**

☐ **Include trials that are no longer recruiting patients.**

1. Abnormalities, Radiation-Induced (1 recruiting study)
2. Alcohol-Related Disorders (13 recruiting studies)
3. Alcoholism (15 recruiting studies)
4. Amphetamine-Related Disorders (1 recruiting study)
5. Asphyxia (2 recruiting studies)
6. Back Injuries (1 recruiting study)
7. Berylliosis (1 recruiting study)
8. Botulism (1 recruiting study)
9. Brain Concussion (1 recruiting study)
10. Brain Injuries (14 recruiting studies)
11. Burns (2 recruiting studies)
12. Carpal Tunnel Syndrome (1 recruiting study)
13. Central Cord Syndrome (1 recruiting study)
14. Cocaine-Related Disorders (4 recruiting studies)
15. Craniocerebral Trauma (10 recruiting studies)
16. Cumulative Trauma Disorders (1 recruiting study)

Gateway

Your Entrance to the Knowledge Resources of the National Library of Medicine

asthma pollution | Search | Clear | Help | FAQ | What's New | About

Term Finder | Limits/Settings | Search Details | History | Locker | Contact Us

Results Summary: 6021 records found [Bookmark this Search]

Bibliographic Resources

2553 **MEDLINE/PubMed** - journal citations, abstracts	2835 **TOXLINE Special** - toxicology citations
16 **NLM Catalog** - books, AVs, serials	2 **Meeting Abstracts**

Consumer Health Resources

63 **MedlinePlus** - Health Topics	4 **MedlinePlus** - Other Resources
2 **MedlinePlus** - Drug Information	1 **ClinicalTrials.gov**
146 **MedlinePlus** - Medical Encyclopedia	3 **DIRLINE** - Directory of Health Organizations
8 **MedlinePlus** - Current Health News	0 **Genetics Home Reference**

Other Information Resources

9 **HSRProj** - Health Services Research Projects	378 **HSDB** - Hazardous Substances Data Bank
1 **OMIM** - Online Mendelian Inheritance in Man	

Part II

ChemIDplus

ChemIDplus

- Chemical Identification File
- Chemical Dictionary/Directory File for chemicals cited in MEDLARS Files & outside resources
- Contains over 368,000 chemical records
- Structural Data for over 247,000 records
- Direct Link/Searches of MEDLINE, TOXNET, and other resources

ChemIDplus

The ChemIDplus file is a database with two different applications:

- ChemIDplus Lite at:
  http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp

- ChemIDplus Advanced at:
  http://chem.sis.nlm.nih.gov/chemidplus/

ChemIDplus Lite vs. Advanced

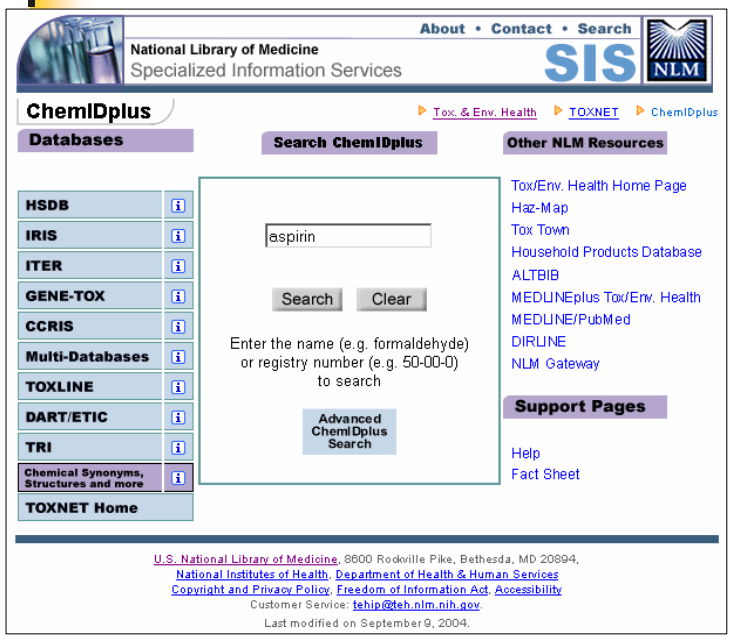
Lite

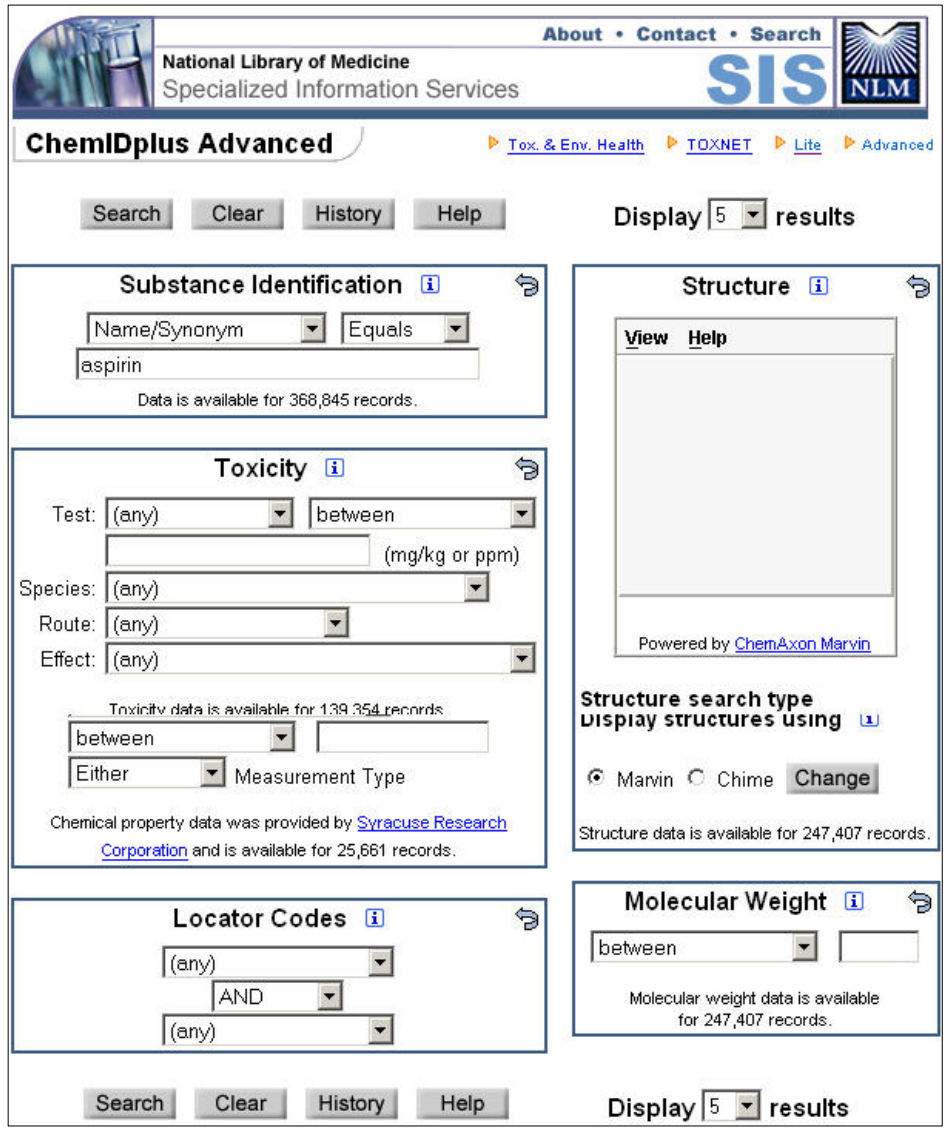
- Basic searching on chemical name/synonym or registry number
- One input box for search term
- Right truncation (“starts with”) is available by using (*) at the end of a search term
- View chemical structure as a GIF image without a plug-in or special display software
- Spell checker

Advanced

- Advanced searching on chemical name/synonym, registry number, molecular formula, classification code, locator code, toxicity, chemical property, structure, or molecular weight
- Qualify search term with “equals”, “starts with”, or “contains”
- Six areas of input with drop down boxes in each area
- View and draw structures using a plug-in or special display software
- Spell checker

Lite vs. Advanced Main Query Page



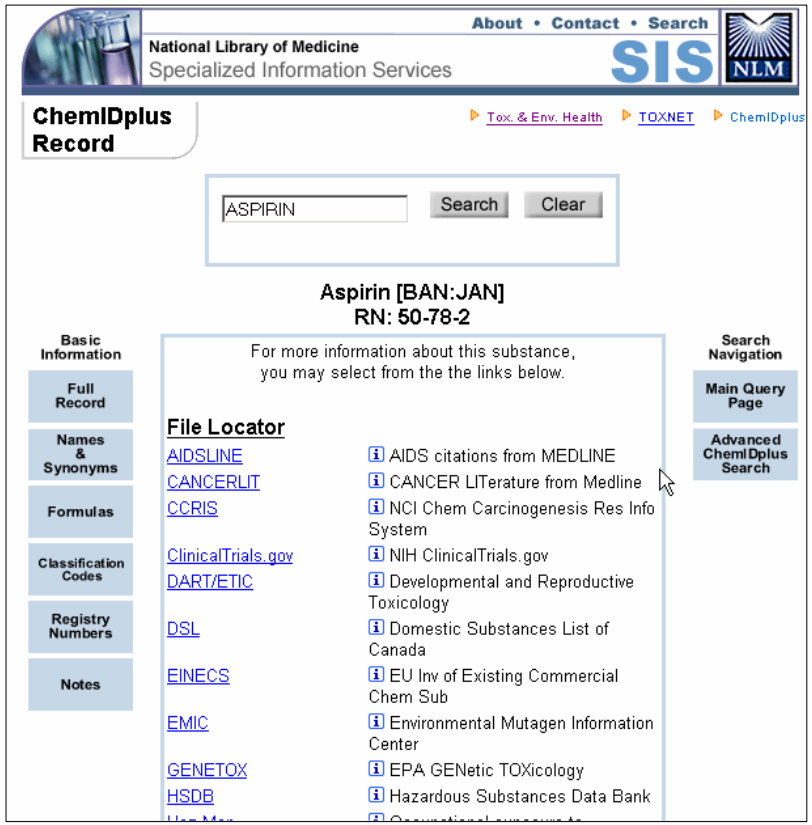


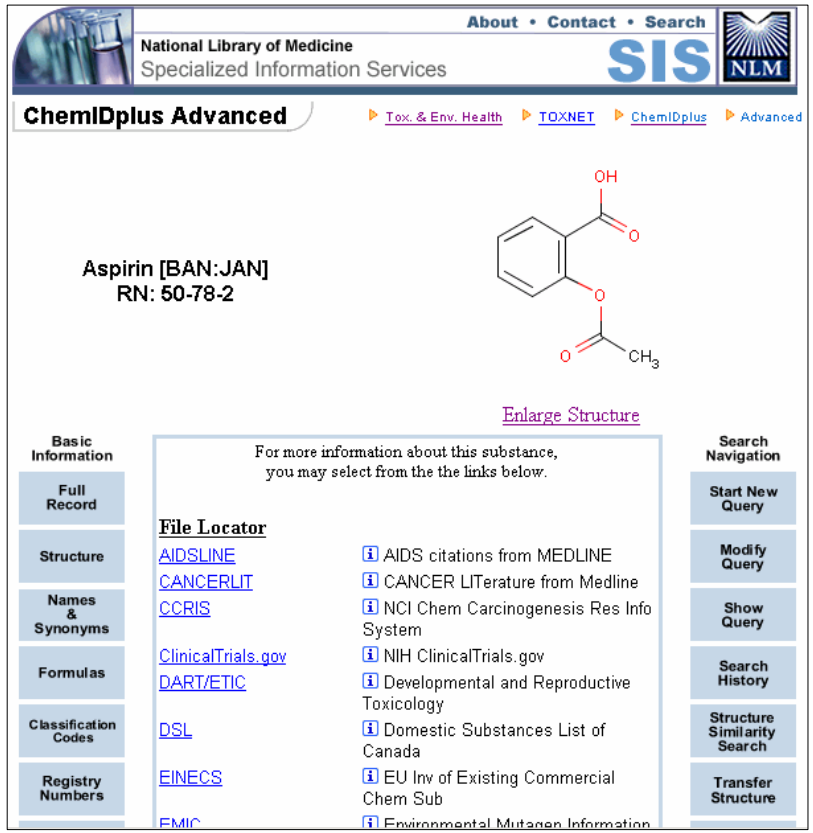
Lite vs. Advanced Results Page

Two Major Differences

- Basic Information and Search Navigation buttons differ in the two applications.
- Toxicity and Physical Property data follow the locator listing in the advanced full record display not in ChemIDplus Lite. The Lite full record ends with the locator listings.

Lite vs. Advanced Results Page





Basic Information and Search Navigation buttons differ in the two applications

Lite vs. Advanced Results Page (cont'd)

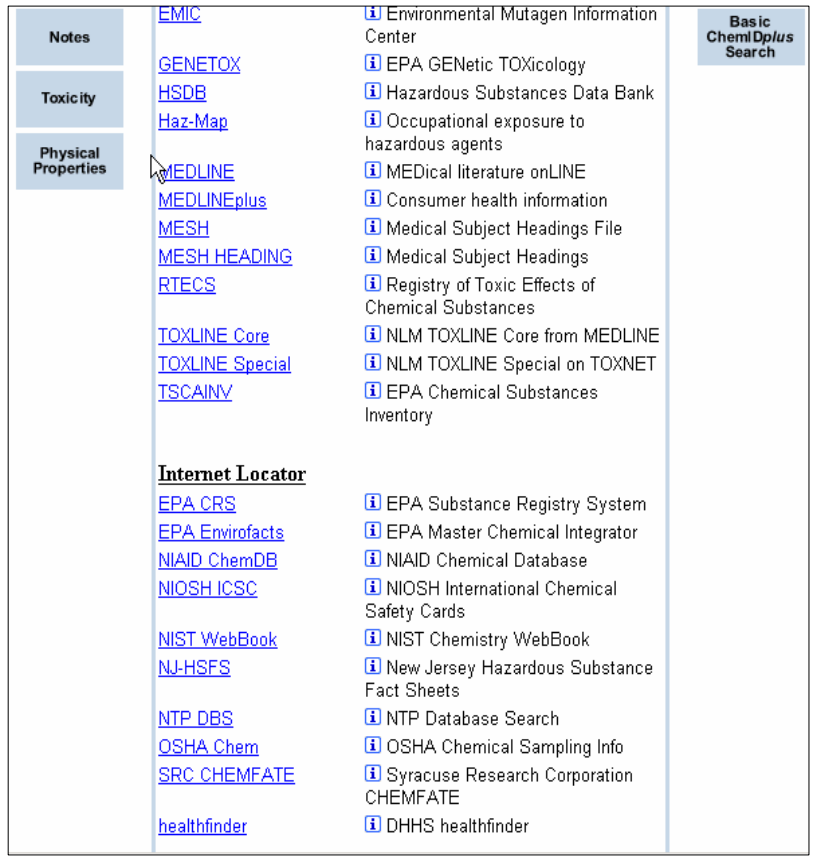
MEDLINE	MEDical literature onLINE
MEDLINEplus	Consumer health information
MESH	Medical Subject Headings File
MESH HEADING	Medical Subject Headings
RTECS	Registry of Toxic Effects of Chemical Substances
TOXLINE Core	NLM TOXLINE Core from MEDLINE
TOXLINE Special	NLM TOXLINE Special on TOXNET
TSCAINV	EPA Chemical Substances Inventory

Internet Locator

EPA CRS	EPA Substance Registry System
EPA Envirofacts	EPA Master Chemical Integrator
NIAID ChemDB	NIAID Chemical Database
NIOSH ICSC	NIOSH International Chemical Safety Cards
NIST WebBook	NIST Chemistry WebBook
NJ-HSFS	New Jersey Hazardous Substance Fact Sheets
NTP DBS	NTP Database Search
OSHA Chem	OSHA Chemical Sampling Info
SRC CHEMFATE	Syracuse Research Corporation CHEMFATE
healthfinder	DHHS healthfinder

Superlist Locator

CA65	California Proposition 65 List
DEA	DEA Controlled Substances
MA	Massachusetts Right-to-know Substances
PA	Pennsylvania Right-to-know Substances



Notes

Toxicity

Physical Properties

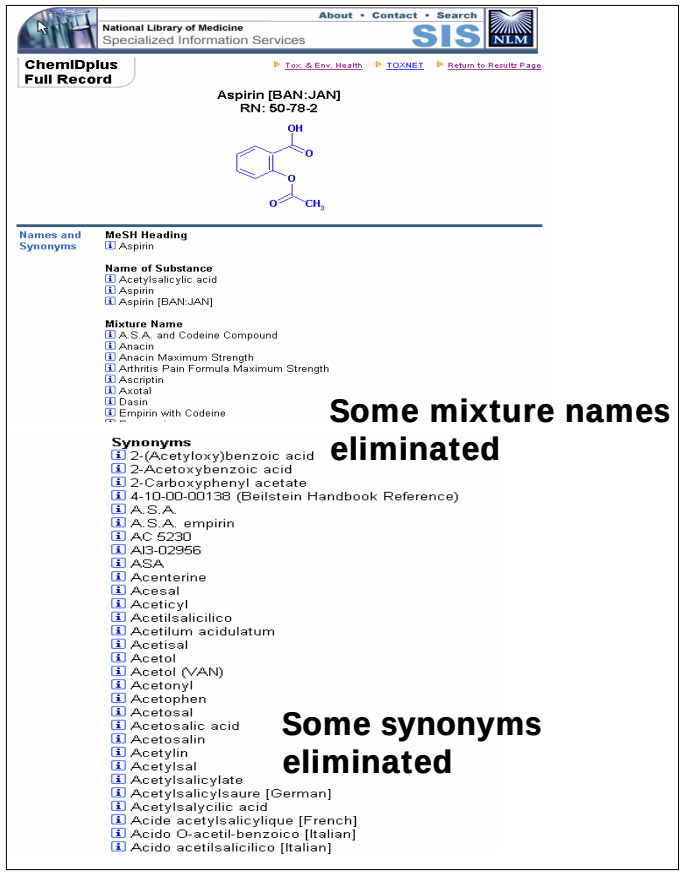
Basic ChemIDplus Search

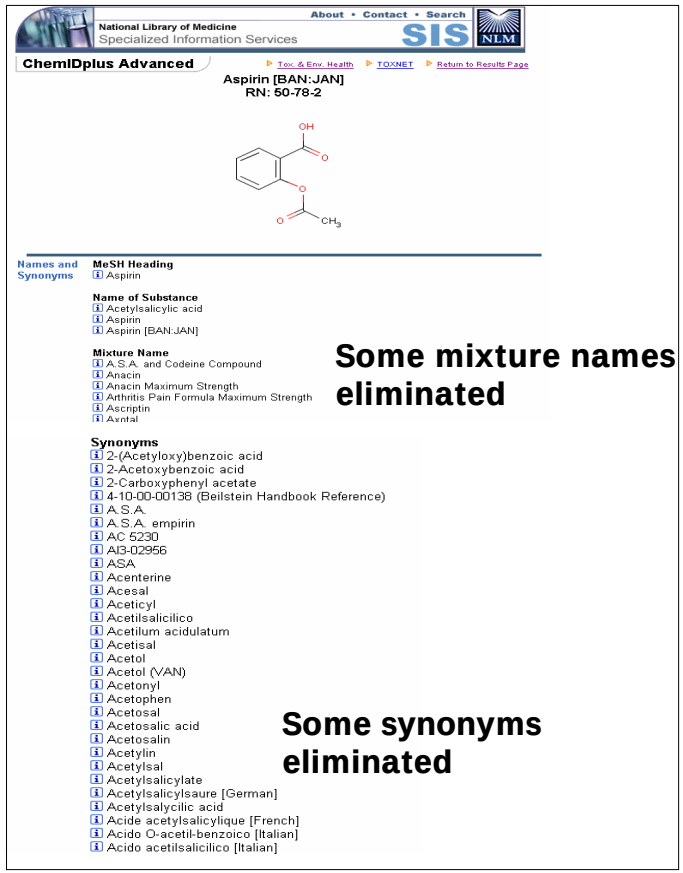
EMIC	Environmental Mutagen Information Center
GENETOX	EPA GENetic TOXicology
HSDB	Hazardous Substances Data Bank
Haz-Map	Occupational exposure to hazardous agents
MEDLINE	MEDical literature onLINE
MEDLINEplus	Consumer health information
MESH	Medical Subject Headings File
MESH HEADING	Medical Subject Headings
RTECS	Registry of Toxic Effects of Chemical Substances
TOXLINE Core	NLM TOXLINE Core from MEDLINE
TOXLINE Special	NLM TOXLINE Special on TOXNET
TSCAINV	EPA Chemical Substances Inventory

Internet Locator

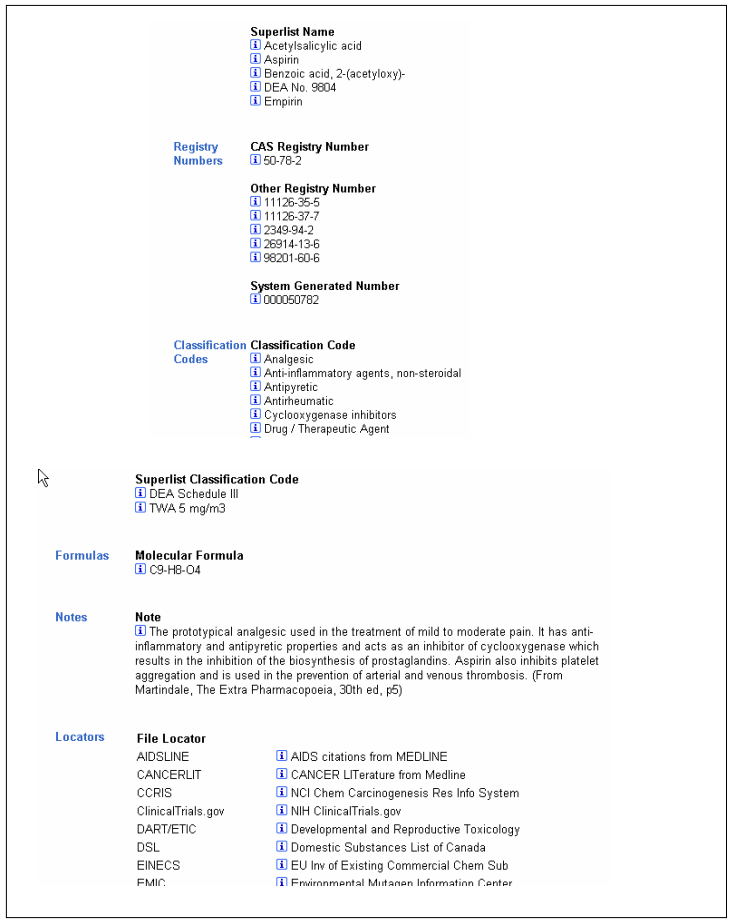
EPA CRS	EPA Substance Registry System
EPA Envirofacts	EPA Master Chemical Integrator
NIAID ChemDB	NIAID Chemical Database
NIOSH ICSC	NIOSH International Chemical Safety Cards
NIST WebBook	NIST Chemistry WebBook
NJ-HSFS	New Jersey Hazardous Substance Fact Sheets
NTP DBS	NTP Database Search
OSHA Chem	OSHA Chemical Sampling Info
SRC CHEMFATE	Syracuse Research Corporation CHEMFATE
healthfinder	DHHS healthfinder

Lite vs. Advanced Full Record Page





Lite vs. Advanced Full Record Page (cont'd)



Superlist Name
- Acetylsalicylic acid
- Aspirin
- Benzoic acid, 2-(acetyloxy)-
- DEA No. 9804
- Empirin

Registry Numbers

CAS Registry Number
- 50-78-2

Other Registry Number
- 11126-35-5
- 11126-37-7
- 2349-94-2
- 26914-13-6
- 98201-60-6

System Generated Number
- 000050782

Classification Codes

Classification Code
- Analgesic
- Anti-inflammatory agents, non-steroidal
- Antipyretic
- Antirheumatic
- Cyclooxygenase inhibitors
- Drug / Therapeutic Agent

Superlist Classification Code
- DEA Schedule III
- TWA 5 mg/m3

Formulas

Molecular Formula
- C9-H8-O4

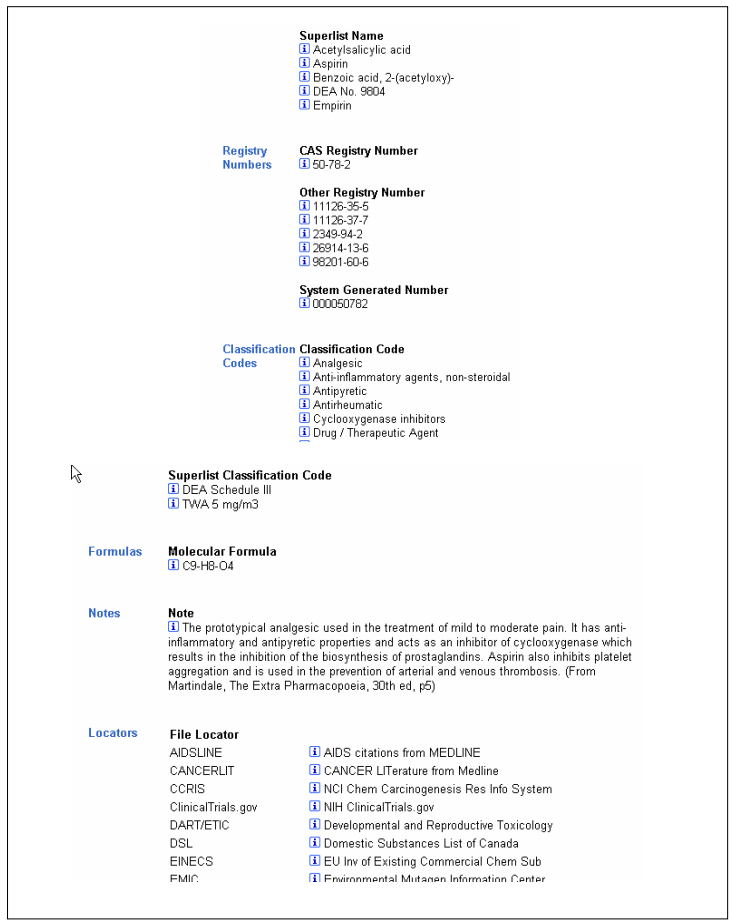
Notes

Note
- The prototypical analgesic used in the treatment of mild to moderate pain. It has anti-inflammatory and antipyretic properties and acts as an inhibitor of cyclooxygenase which results in the inhibition of the biosynthesis of prostaglandins. Aspirin also inhibits platelet aggregation and is used in the prevention of arterial and venous thrombosis. (From Martindale, The Extra Pharmacopoeia, 30th ed, p5)

Locators

File Locator

AIDSLINE	AIDS citations from MEDLINE
CANCERLIT	CANCER LIterature from Medline
CCRIS	NCI Chem Carcinogenesis Res Info System
ClinicalTrials.gov	NIH ClinicalTrials.gov
DART/ETIC	Developmental and Reproductive Toxicology
DSL	Domestic Substances List of Canada
EINECS	EU Inv of Existing Commercial Chem Sub
EMIC	Environmental Mutagen Information Center



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EINECS	EU Inv of Existing Commercial Chem Sub
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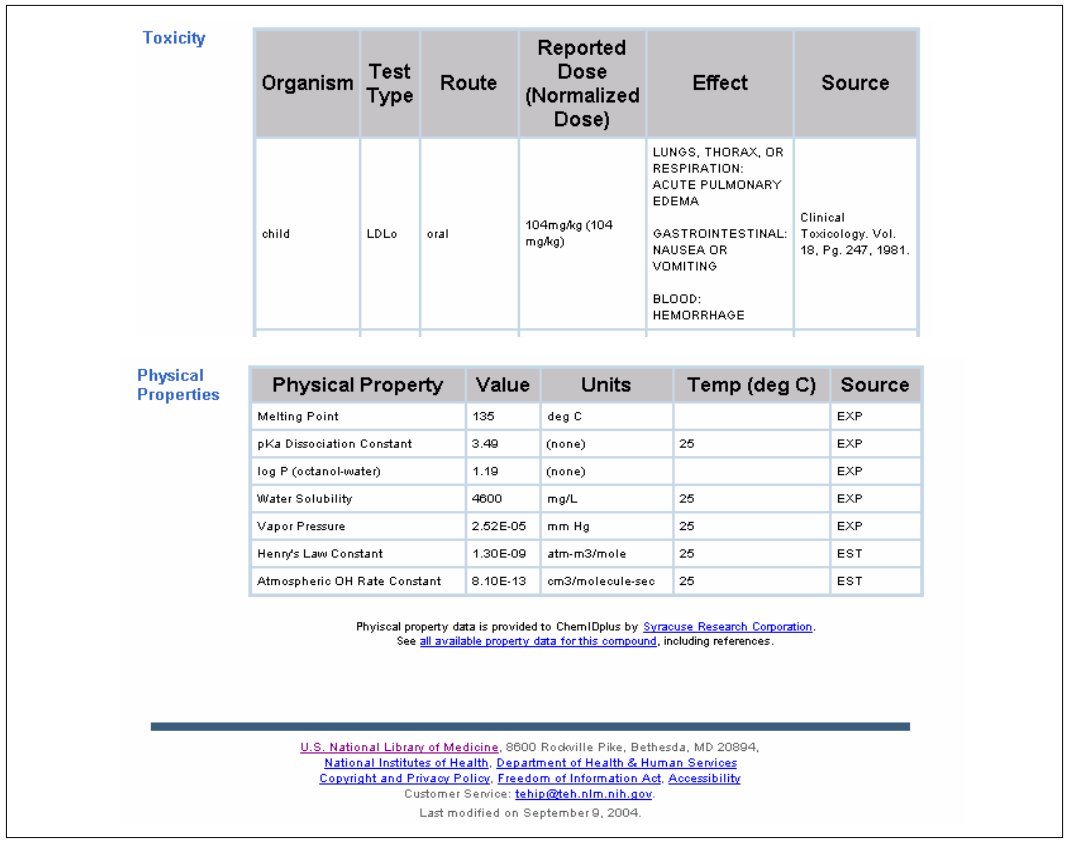
Additional Data in the Advanced Full Record



Toxicity

Organism	Test Type	Route	Reported Dose (Normalized Dose)	Effect	Source
child	LDLo	oral	104mg/kg (104 mg/kg)	LUNGS, THORAX, OR RESPIRATION: ACUTE PULMONARY EDEMA GASTROINTESTINAL: NAUSEA OR VOMITING BLOOD: HEMORRHAGE	Clinical Toxicology. Vol. 18, Pg. 247, 1981.

Physical Properties

Physical Property	Value	Units	Temp (deg C)	Source
Melting Point	135	deg C		EXP
pKa Dissociation Constant	3.49	(none)	25	EXP
log P (octanol-water)	1.19	(none)		EXP
Water Solubility	4600	mg/L	25	EXP
Vapor Pressure	2.52E-05	mm Hg	25	EXP
Henry's Law Constant	1.30E-09	atm-m3/mole	25	EST
Atmospheric OH Rate Constant	8.10E-13	cm3/molecule-sec	25	EST

Phyiscal property data is provided to ChemIDplus by Syracuse Research Corporation.
See all available property data for this compound, including references.

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National Institutes of Health, Department of Health & Human Services
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Customer Service: tehip@teh.nlm.nih.gov
Last modified on September 9, 2004.

Toxicity and Physical Property data follow the locator listing in the advanced full record display not in ChemIDplus Lite. The Lite full record ends with the locator listings.

ChemIDplus Content

Names and Synonyms

- **Name of Substance**: Usually the most commonly used name, includes MeSH heading and USAN name
- **MeSH Heading**: NLM Medical Subject Heading
- **Systematic Name**: Describes molecular structure
- **Synonyms**: All other names found for the substance
- **Mixture Name**: Name of multi-component substance, one of which is the retrieved substance
- **SUPERLIST Name**: The name used by regulatory/guidance lists

ChemIDplus Content

- **CAS Registry Number**: Unique number of up to 9 digits assigned by Chemical Abstracts Service used to index chemicals. ChemIDplus uses the hyphenated format

- **ID**: The ID number is the CAS Registry Number in a non-hyphenated fixed length format or a unique number for entries that have no CAS Registry or NLM assigned numbers

- **Molecular Structure**: Display of structure (if present) via Chime or Marvin

- **Registry Numbers**: All CAS Registry Numbers known to be assigned over time to a specific compound

ChemIDplus Content

- **Toxicity** Values that indicate whether the dose caused death (LD) or other toxic non-lethal effect (TD) or whether it was administered as a lethal concentration (LC) or toxic concentration in the inhaled air (TC)

- **Chemical Properties** Values for melting point, boiling point, water solubility, octanol/water partition coefficient, vapor pressure, acid dissociation constant, Henry's law, and OH radical reaction rate constant

- **Molecular Weight** The mass of a molecule

*Refer to the Advanced Help Section for more detailed definitions

ChemIDplus Exercises

Using ChemIDplus Lite: http://chem.sis.nlm.nih.gov/chemidplus/chemidpluslite.jsp

1. Check the file locator to see what NLM databases contain information on phenytoin. Search DART without leaving ChemIDplus.

   Type Phenytoin in search box, click Search. Click DART/ETIC in the middle blue box under File Locator, view record in slave window.

2. Locate the record for styrene and link to the Internet Locator ATSDR TOXFAQS. Next link to the NIOSH Pocket Guide. Is styrene on the EPA Clean Air Act (CAA1)? Activate the Classification Code button and find the IARC classification on carcinogenecity, click on the "i" to see the source.

   Type styrene in the search box, click Search. Scroll down the middle blue box and under Internet Locators click the link to ATSDR TOXFAQs. Close the slave window and click NIOSH Pocket Guide also under Internet Locators. Next, scroll down and under Superlist Locator click the link to the CAA1 listing for styrene. Under Basic Information on the left, click the button for Classification Code. Under Superlist Classification Code, click the "i" for Overall Carcinogenic Evaluation….. to view this data source in the slave window.

Using ChemIDplus Advanced: http://chem.sis.nlm.nih.gov/chemidplus/chemidplusheavy.jsp

1. Find the "valium" record in ChemIDplus and use its structure to do substructure and similarity searches respectively. How many structures are in each category?

   Type valium in the substance identification input box, click Search. Now click the Transfer Structure button in the left column. In the Structure input box, be sure the default substructure search is selected. Click search. View the result count. Now click the modify query button. In the Structure input box, select similarity search and type in 90 in the percentage pull-down box (the default is 80%). Click search. View the result count. This result give structures that are 90% similar or greater. If no results are retrieved, then a lower percentage must be used.

2. Identify all the HSDB records that are ozone depletors (CAA2).

   In the Locator Code input box select HSDB from the first pull-down list. Type HSDB in the search box. Be sure the default "and" is selected in the second pull-down list. In the third pull-down list choose CAA2. Click Search.

3. Identify all compounds that have an orally administered LD50 less than 50mg/kg (less than 50mg/kg is considered extremely toxic by EPA guidelines-See Help Section under Toxicity).

   In the Toxicity input box next to Test, select LD50 and less than from the pull-down boxes. Then, type 50 in the empty input box below Test. Next to Route, select oral from the pull-down box. Click search.

4. Find the logP value for the chemical DDT in the Physical Properties table. Use the Help Section to verify that this substance is stored in the fatty tissues of animals based on the logP value in the table.

   Type DDT in the substance identification input box and click search. Click on the Physical Properties button under Basic Information. Note the logP value in the table in the slave window. Close the window. Click the Start New Query button to return to the main query page. Click the Help button. Click on the link to Chemical Properties. Scroll down and read the example given for logP values.

Part III

TOXNET Overview, HSDB, & Related Files

What is TOXNET?

- A free web-based system of databases on toxicology, environmental health, hazardous chemicals, toxic releases, chemical nomenclature, and specialty areas such as occupational health and consumer products
- A product of NLM's Toxicology and Environmental Health Information Program
- Toxicology Data (one record per chemical)– HSDB, IRIS, CCRIS, GENE-TOX, ITER (can also search any combination of these files with "Multi-Databases" interface)
- Toxicology Literature (bibliographic references) – TOXLINE, DART/ETIC
- Toxic Releases (of chemicals to the environment) – TRI
- Chemical Identification/Nomenclature – ChemIDplus
- Specialty Databases – HazMap, Household Products
- User Support – tehip@teh.nlm.nih.gov or click on "Contact TOXNET"

Where is TOXNET?

toxnet.nlm.nih.gov

Toxicology Data Files - Content

Hazardous Substances Data Bank (HSDB) – from NLM

4888 Chemical Records

Human Health Effects
Emergency Medical Treatment
Animal Toxicity Studies
Metabolism/Pharmacokinetics
Pharmacology
Environmental Fate/Exposure
Environmental Standards & Regulations

Chemical/Physical Properties
Chemical Safety & Handling
Occupational Exposure Standards
Manufacturing and Use
Laboratory Methods
Special References
Synonyms and Identifiers

More about HSDB

- Factual Data Bank/Online Handbook
- Peer-Reviewed – Scientific Review Panel
- Review Status Tags – Peer Reviewed, QC Reviewed, Unreviewed
- Fully Referenced
- Data – Excerpted from books, government documents, technical reports, selected primary literature, databases. Some data compiled expressly for HSDB.

Toxicology Data Files - Content

Chemical Carcinogenesis Research Information System (CCRIS) –
from the National Cancer Institute (NCI)
8976 Chemical Records

Carcinogenicity Studies
Tumor Inhibition Studies
Tumor Promotion Studies
Mutagenicity Studies

e.g. Carcinogenicity Studies Data Structure – species, route, tumor site/type of lesion, results, reference

Toxicology Data Files - Content

GENE-TOX

from the U.S. Environmental Protection Agency (EPA)

3214 Chemical Records

Note: GENE-TOX not updated since January 2000

Mutagenicity Studies

Data Structure – assay type, assay code, results, panel report, reference

Toxicology Data Files - Content

Integrated Risk Information System (IRIS)

from the U.S. Environmental Protection Agency (EPA)

543 Chemical Records

Noncarcinogenic Assessment – Oral (RfD)	Carcinogenic Assessment - Oral
Noncarcinogenic Assessment – Inhalation (RfC)	Carcinogenic Assessment - Inhalation

- Contains EPA consensus scientific positions and quantitative values on cancer and non-cancer health effects that may result from lifetime oral or inhalation exposure to specific chemical substances in the environment
- Risk Assessment – Identification and quantification of risk. Function of toxicity and exposure
- Risk Assessment Process (National Academy of Sciences, 1983) – 1. Hazard identification, 2. Dose-Response assessment [IRIS], 3. Exposure assessment, 4. Risk Characterization

Toxicology Data Files - Content

International Toxicity Estimates for Risk Assessment (ITER)
from the Toxicology Excellence for Risk Assessment (TERA)
A Non-profit Corporation

624 Chemical Records

Tabular and Comparative Risk Data for Cancer Oral, Non-Cancer Oral, Cancer Inhalation, Non-Cancer Inhalation Effects from:

Agency for Toxic Substances and Disease Registry, U.S. (ATSDR)
Environmental Protection Agency, U.S. (EPA)
Health Canada
International Agency for Research on Cancer (IARC)
NSF International (National Sanitation Foundation)
National Institute of Public Health and the Environment, Dutch (RIVM)
Independently-derived Values

Includes synopses, links to organization source documents

TOXNET Search Screen Options

- TOXNET Home Page Search
  - Single query box search
  - No limits
  - Gives quick counts of records retrieved and allows links to each database
  - Number of records retrieved in each database may vary from numbers attained by searching databases directly
- Database specific searches – interface varies according to type of database
- Multi-Databases search – interface for any combination of data files (i.e. HSDB, CCRIS, GENE-TOX, IRIS, ITER)

Search Page - Toxicology Data Files

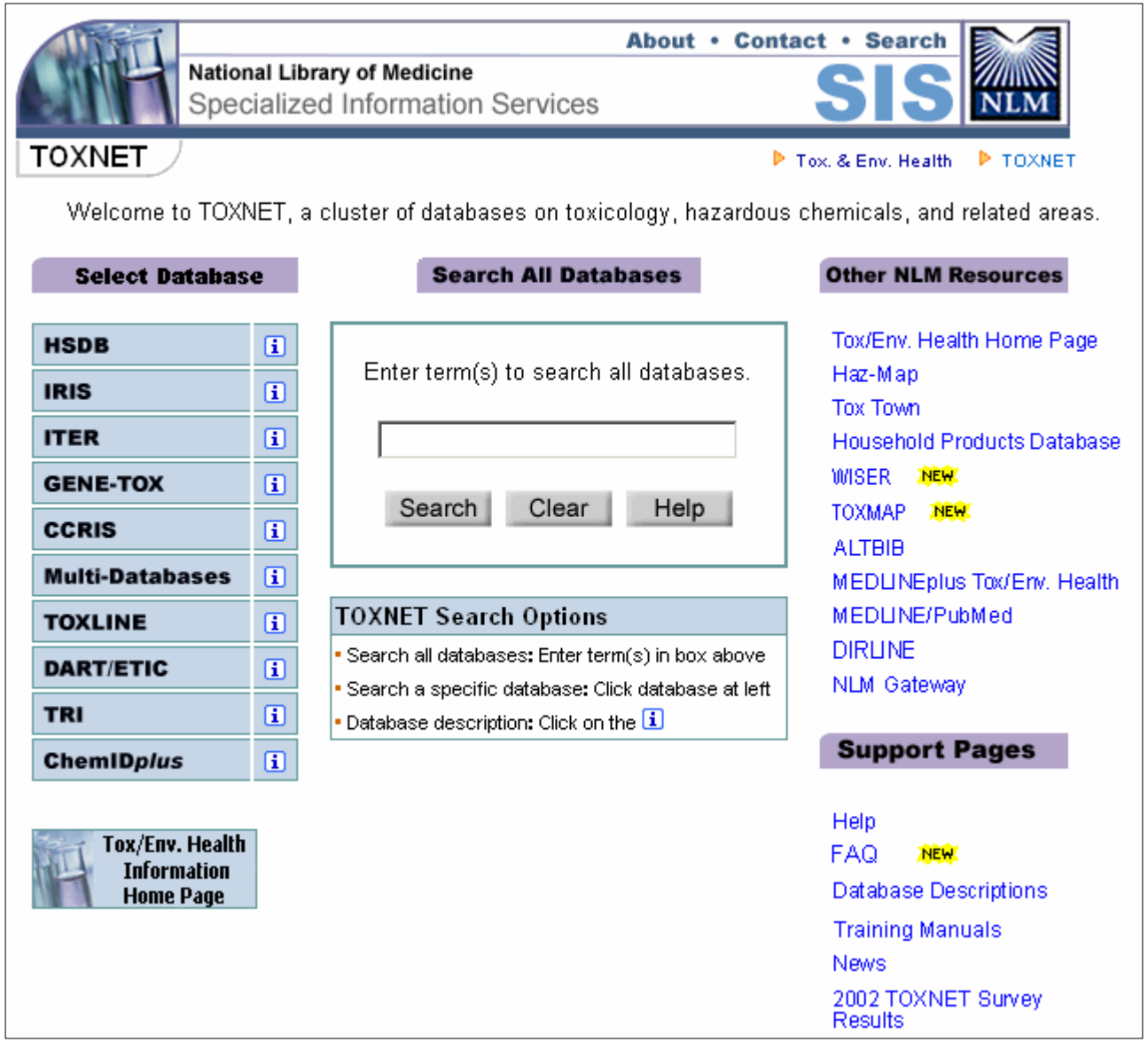
- Single Box Search for:
  - Chemicals – enter chemical names or CAS Registry numbers. System add synonyms (default) or use exact terms entered.
  - Other Terms
- Browse Index for:
  - All Words
  - Chemical name
  - CAS Registry Number
- Limits
  - For more precise searching – searching for terms within particular data fields

Search Results Page -Toxicology Data Files

- Display chemical names and registry numbers of retrieved records
- Relevancy Ranked Display
- Select Record(s) of Interest
- View Details of Search Strategy
- Modify Search – Returns you to Search Page with query intact
- Begin a New Search – Returns you to Search Page with blank query box
- Modify search or begin a new search directly on Results Page
- Sort Results – By substance name, ascending or descending sequence
- Save Checked Items, Display Checked Items
- View Search History and combine search statements
- Download – Entire Record(s) or Custom Format
- Browse Index
- Get Help
- Return to TOXNET Home

Selected Record Page - Toxicology Data Files

- Default display varies
  - Chemical Search – HSDB displays human health effects, other files display full record
  - Other Term(s) Search – Best Sections
- Search Term(s) Highlighted in Red
- Choose fields for display from Contents (expand, contract categories)
- Navigate – Next Item, Previous Item
- View Details of Search Strategy
- Modify Search – Returns you to Search Screen with query intact
- Begin a New Search – Returns you to Search Screen with blank query box
- Download – Entire Record(s) or Custom Format
- Browse Index
- Get Help
- Return to TOXNET Home
- Link to records for the same chemical in Other Files - (including TOXLINE and ChemID*plus*)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TOXNET
Welcome to TOXNET, a cluster of databases on toxicology, hazardous chemicals, and related areas.
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DART/ETIC
TRI
ChemIDplus
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TOXMAP NEW
ALTBIB
MEDLINEplus Tox/Env. Health
MEDLINE/PubMed
DIRLINE
NLM Gateway
Support Pages
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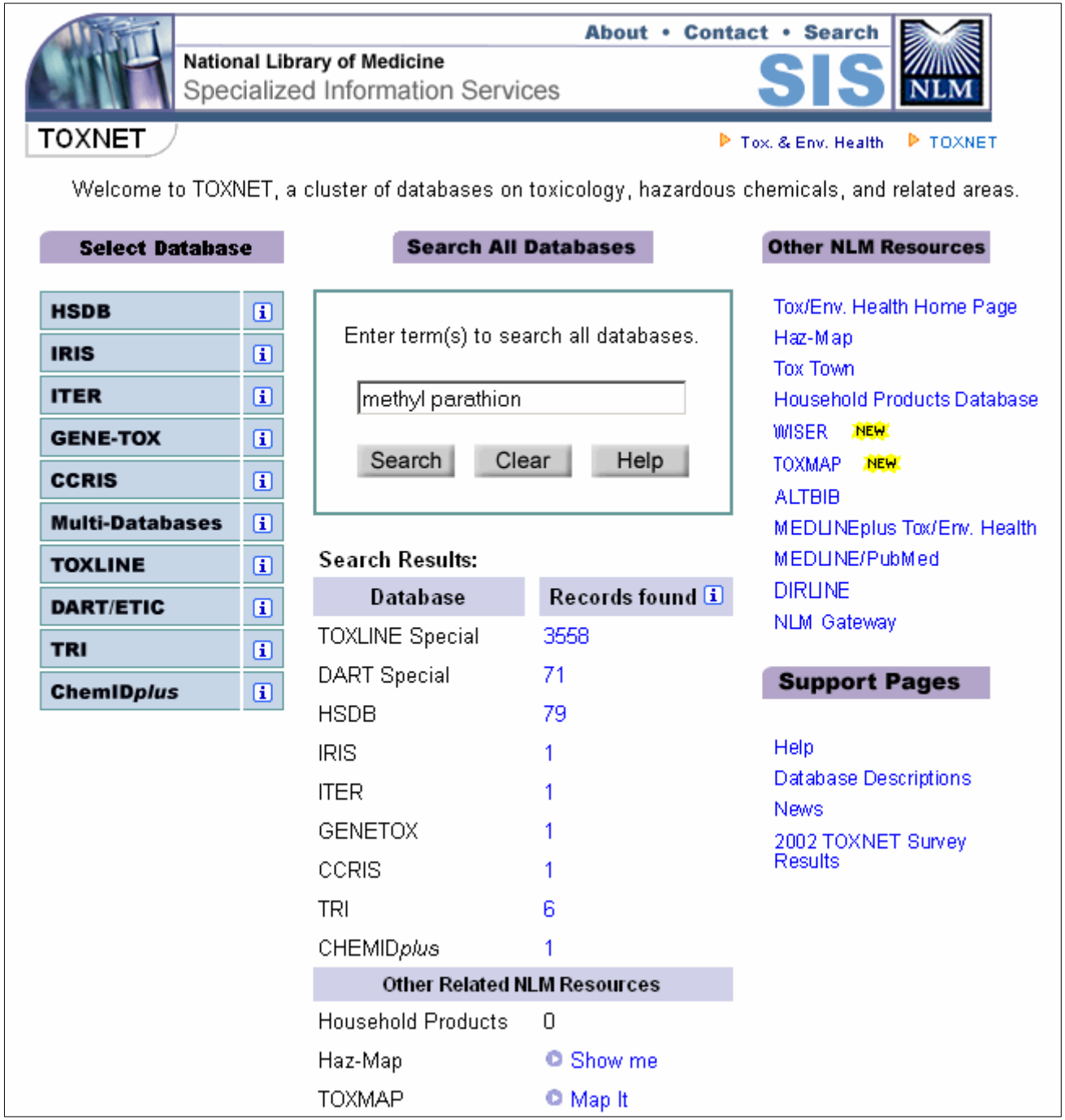
FAQ NEW
Database Descriptions
Training Manuals
News
2002 TOXNET Survey Results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SIS
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TOXNET
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TOXNET
Welcome to TOXNET, a cluster of databases on toxicology, hazardous chemicals, and related areas.
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Multi-Databases
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ChemIDplus
Search All Databases
Enter term(s) to search all databases.
methyl parathion
Search
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Help
Search Results:
Database
Records found
TOXLINE Special 3558
DART Special 71
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IRIS 1
ITER 1
GENETOX 1
CCRIS 1
TRI 6
CHEMIDplus 1
Other Related NLM Resources
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HSDB

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TOXNET Home

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Contract all categories

Expand all categories

Select Clear

- FULL RECORD
- Human Health Effects
- Emergency Medical Treatment
- Animal Toxicity Studies
- Metabolism/Pharmacokinetics
- Pharmacology
- Environmental Fate & Exposure
- Environmental Standards & Regulations
- Chemical/Physical Properties
- Chemical Safety & Handling
- Occupational Exposure Standards
- Manufacturing/Use Information
- Laboratory Methods
- Special References
- Synonyms and Identifiers
- Administrative Information

Click to jump to data in this section

METHYL PARATHION

CASRN: 298-00-0

For other data, click on the Table of Contents

Human Health Effects:

Toxicity Summary:

IDENTIFICATION: **Methyl parathion** is an organophosphorus insecticide that is relatively insoluble in water, poorly soluble in petroleum ether and mineral oils, and readily soluble in most organic solvents. Pure **methyl parathion** consists of white crystals; technical **methyl parathion** is a light tan color with a garlic-like odor. It is thermally unstable. HUMAN EXPOSURE: The production, formulation, handling, and use of **methyl parathion** as an insecticide are the principal potential sources of exposure of humans. Skin contact and, to a lesser degree, inhalation are the main routes of exposure to workers. The general population may be exposed to air-, water-, and food-borne residues of **methyl parathion** as a consequence of agricultural or forestry practices, the misuse of the agent resulting in the contamination of fields, crops, water, and air through off-target spraying. **Methyl parathion** is a highly toxic organophosphorus ester insecticide. Overexposure from handling during manufacture, use, and/or accidental or intentional ingestion may cause severe or fatal poisoning. **Methyl parathion** formulations may, or may not, be irritating to the eyes or to the skin, but are readily absorbed. Several cases of acute **methyl parathion** poisoning have been reported. Signs and symptoms are those characteristic of systemic poisoning by cholinesterase-inhibiting organophosphorous compounds. They include peripheral and central cholinergic nervous system manifestations appearing as rapidly as a few minutes after exposure. In case of dermal exposure, symptoms may increase in severity for more than one day and may last several days. Studies of **methyl parathion**


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Click to see methyl parathion records in other databases.
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Metabolism/Pharmacokinetics
Pharmacology
Environmental Fate & Exposure
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Chemical/Physical Properties
Chemical Safety & Handling
Occupational Exposure Standards
Manufacturing/Use Information
Laboratory Methods
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Synonyms and Identifiers
Administrative Information
METHYL PARATHION
CASRN: 298-00-0
For other data, click on the Table of Contents
Environmental Fate & Exposure:
Environmental Fate/Exposure Summary:
Methyl parathion's use as an insecticide will result in its direct release to the environment. If released to air, a vapor pressure of 1.5X10-6 mm Hg at 20 deg C indicates methyl parathion will exist in both the vapor and particulate phases in the ambient atmosphere. Vapor-phase methyl parathion will be degraded in the atmosphere by reaction with photochemically-produced hydroxyl radicals; the half-life for this reaction in air is estimated to be 6.5 hours. Particulate-phase methyl parathion will be removed from the atmosphere by wet and dry deposition. Methyl parathion absorbs light in the environmental spectrum, suggesting a potential for direct photolysis. If released to soil, methyl parathion is expected to have low to moderate mobility based upon Koc values ranging from 366 to 1,516. Volatilization from moist or dry soil surfaces is not expected to be an important fate process based upon methyl parathion's Henry's Law constant of 8.4X10-8 atm-cu m/mole and vapor pressure, respectively. Hydrolysis is expected to be an important process in moist soils since methyl parathion hydrolyzes in natural waters with half-lives ranging from 6.5 to 13 days at 40 deg C and pH values less than 8. Biodegradation is expected to be an important fate process in both soil and water. Greater than 40% of methyl parathion degraded to carbon dioxide and bound residues in 14 days in moist soils. In nonsterile sediment/water slurries, half-lives ranged from 2.3 days to 30 days. If released into water, some adsorption of methyl parathion to suspended solids and sediment in the water column is expected based upon the Koc values. Volatilization from water surfaces is


HSDB
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Links to Related Records in Other Databases...
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CCRIS Record
GENETOX Record
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Chemical Safety & Handling
Occupational Exposure Standards
Manufacturing/Use Information
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Special References
Synonyms and Identifiers
Administrative Information
METHYL PARATHION
CASRN: 298-00-0
For other data, click on the Table of Co
Environmental Fate & Exposure:
Environmental Fate/Exposure Summar
Methyl parathion's use as an insecticide will result in its direct release to the environment. If released to air, a vapor pressure of 1.5X10-6 mm Hg at 20 deg C indicates methyl parathion will exist in both the vapor and particulate phases in the ambient atmosphere. Vapor-phase methyl parathion will be degraded in the atmosphere by reaction with photochemically-produced hydroxyl radicals; the half-life for this reaction in air is estimated to be 6.5 hours. Particulate-phase methyl parathion will be removed from the atmosphere by wet and dry deposition. Methyl parathion absorbs light in the environmental spectrum, suggesting a potential for direct photolysis. If released to soil, methyl parathion is expected to have low to moderate mobility based upon Koc values ranging from 366 to 1,516. Volatilization from moist or dry soil surfaces is not expected to be an important fate process based upon methyl parathion's Henry's Law constant of 8.4X10-8 atm-cu m/mole and vapor pressure, respectively. Hydrolysis is expected to be an important process in moist soils since methyl parathion hydrolyzes in natural waters with half-lives ranging from 6.5 to 13 days at 40 deg C and pH values less than 8. Biodegradation is expected to be an important fate process in both soil and water. Greater than 40% of methyl parathion degraded to carbon dioxide and bound residues in 14 days in moist soils. In nonsterile sediment/water slurries, half-lives ranged from 2.3 days to 30 days. If released into water, some adsorption of methyl parathion to suspended solids and sediment in the water column is expected based upon the Koc values. Volatilization from water surfaces is

ITER | Download | Return to HSDB | TOXNET Home

Contents

Contract all categories
Expand all categories
Select | Clear

- FULL RECORD
- Substance Identification/Summary Table
- Risk Data

METHYL PARATHION

CASRN: 298-00-0

For other data, click on the Table of Contents

Substance Identification/Summary Table:

Substance Name: METHYL PARATHION

CAS Registry Number: 298-00-0

Risk Values - Summary Table:

Summary Risk Table for: METHYL PARATHION							
Risk Value Type \ Organization	ATSDR	Health Canada	IARC	ITER	NSF Intl	RIVM	U.S.EPA
Noncancer Oral	√	--	--	--	--	--	√
Cancer Oral	√	--	--	--	--	--	--
Noncancer Inhalation	√	--	--	--	--	--	--
Cancer Inhalation	√	--	--	--	--	--	--
√ = *Chemical evaluated and ITER data online.*							

Risk Data :

Risk Data - Noncancer Oral:

ITER Noncancer Oral Risk Table for: METHYL PARATHION							
Risk Value Parameter\ Organization	ATSDR	Health Canada	IARC	ITER	NSF Intl	RIVM	U.S.EPA
Risk Value Name	Chronic MRL	--	--	--	--	--	RfD
Risk Value*	3E-4	--	--	--	--	--	2.5E-4
Year	1999	--	--	--	--	--	1987
Basis (Experimental)*	NOAEL 0.025	--	--	--	--	--	NOAEL 0.025
Basis (Adjusted)*	N/A	--	--	--	--	--	N/A
Uncertainty Factor	100	--	--	--	--	--	100
Critical Organ or Effect	blood	--	--	--	--	--	blood
Species	rat	--	--	--	--	--	rat
Study	Suba,1984	--	--	--	--	--	Monsanto,1984
View Specifics:	Click here	--	--	--	--	--	Click here

Query:
("methyl parathion" OR metaphos OR "parathion methyl" OR wofatox OR vofatox OR thiophenit OR tekwaisa OR quinophos OR oleovofotox OR nitrox OR metylparation OR metyloparation OR "methyl niran" OR "methyl fosferno" OR metafos OR meptox OR mepaton OR "folidol m" OR "dimethyl parathion" OR devithion OR dalf)

The chemical name **methyl parathion** was identified.

The following terms were added from ChemIDplus:

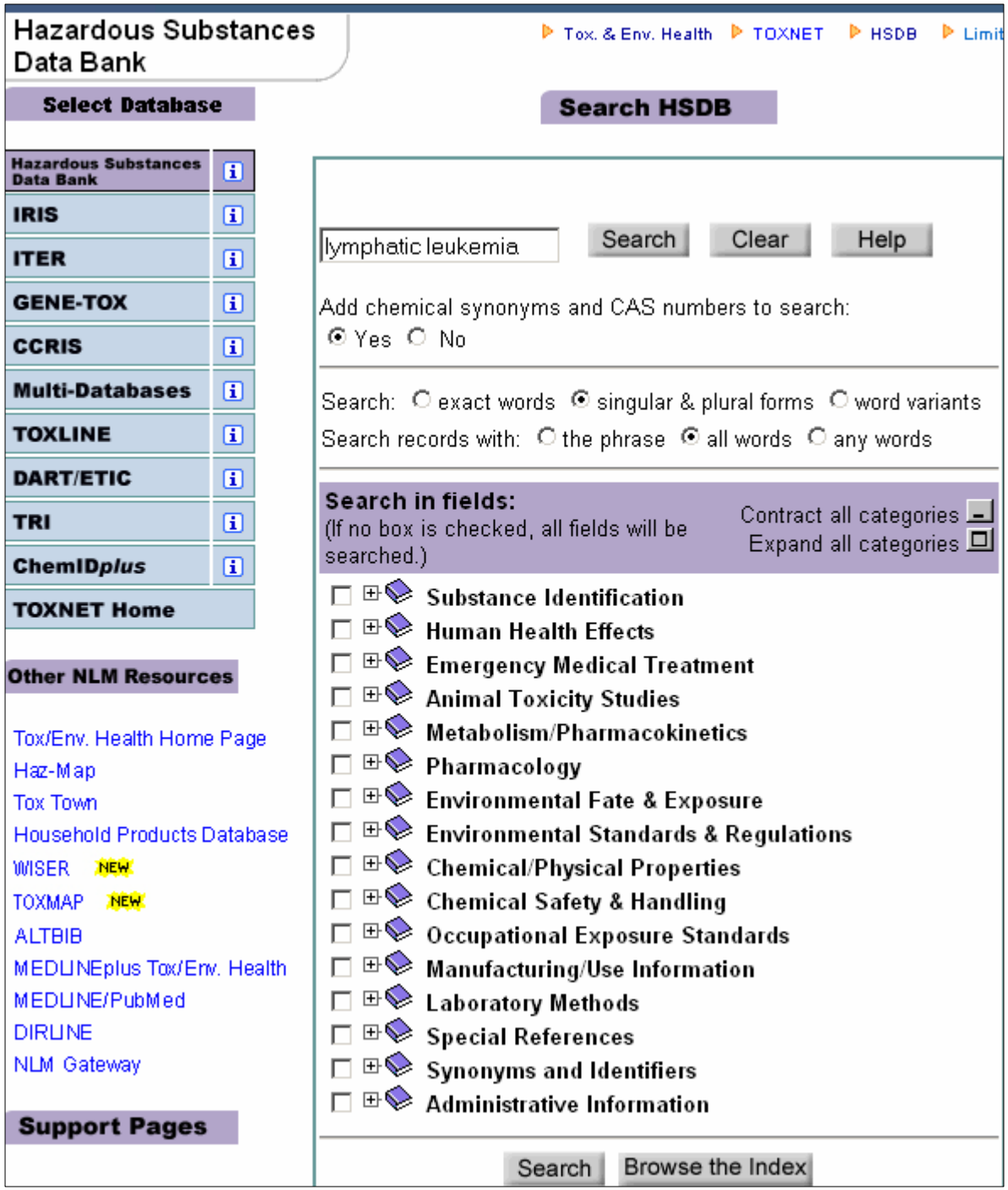
metaphos
parathion methyl
wofatox
vofatox
thiophenit
tekwaisa
quinophos
oleovofotox
nitrox
metylparation
metyloparation
methyl niran
methyl fosferno
metafos
meptox
mepaton
folidol m
dimethyl parathion
devithion
dalf

Details for Methyl Parathion Search in HSDB

CAS Registry Number: **298-00-0**

—

LIMITS


Hazardous Substances Data Bank
Tox. & Env. Health
TOXNET
HSDB
Limit
Select Database
Search HSDB
Hazardous Substances Data Bank
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ALTBIB
MEDLINEplus Tox/Env. Health
MEDLINE/PubMed
DIRLINE
NLM Gateway
Support Pages
lymphatic leukemia
Search
Clear
Help
Add chemical synonyms and CAS numbers to search:
Yes
No
Search: exact words singular & plural forms word variants
Search records with: the phrase all words any words
Search in fields:
(If no box is checked, all fields will be searched.)
Contract all categories
Expand all categories
Substance Identification
Human Health Effects
Emergency Medical Treatment
Animal Toxicity Studies
Metabolism/Pharmacokinetics
Pharmacology
Environmental Fate & Exposure
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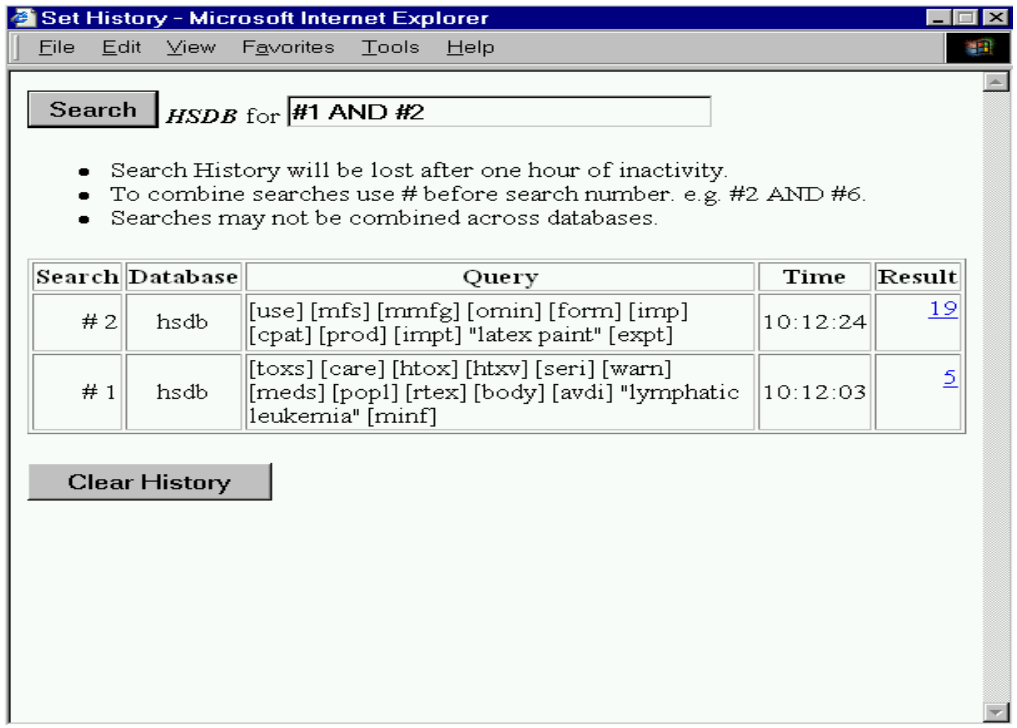
Chemical/Physical Properties
Chemical Safety & Handling
Occupational Exposure Standards
Manufacturing/Use Information
Laboratory Methods
Special References
Synonyms and Identifiers
Administrative Information
Search
Browse the Index

Search History

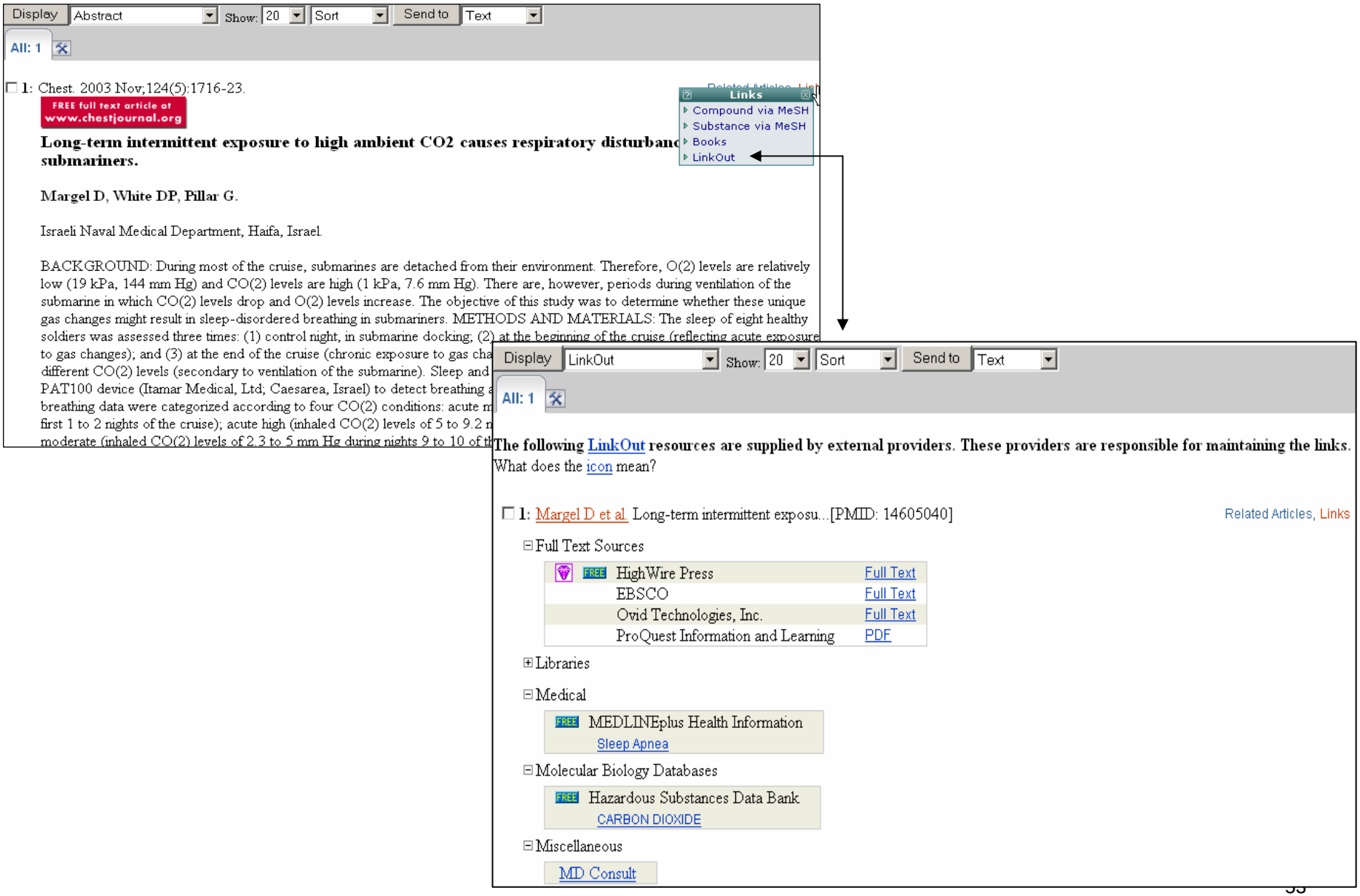
- To review search strategies
- To combine search statements (within databases)
- Query Box provided to enter subsequent searches directly on Search History Page
- Use # to combine search statements (e.g. #1 AND #2)



Boolean Searching, Field Qualification, Search Techniques

- Upper Case Boolean Operators (AND, OR, NOT)
- Fields in brackets and post-qualified (e.g. benzene [na])
- Nested parenthesis permitted
- Phrase searching with quotation marks (e.g. “coronary artery bypass”)
- Asterisk (*) for truncation (e.g. carcinogen*)

LinkOut from PubMed to HSDB



Part IV

TOXLINE and Other Bibliographic Files

TOXLINE
TOXicology Literature onLine

- Covers pharmacological, biochemical, physiological, environmental, and toxicological effects of chemicals/other agents on living systems
- Citations, Abstracts, Keywords and/or MeSH (Medical Subject Headings)
- CAS Registry Numbers
- From 1965 to date (and earlier)
- Drawn from Secondary Sources, varying unit record formats
- Components – TOXLINE Core (on PubMed, accessible via TOXNET) and TOXLINE Special (on TOXNET)
- Over 3 million toxicology related records combined

TOXLINE Core (on PubMed)

- Toxicology Subset limit of MEDLINE on PubMed
- Similar to TOXLINE's former TOXBIB subfile
- Drawn from standard biomedical journal literature
- Accessible directly on PubMed or from the TOXLINE search screen on TOXNET
- Some features of PubMed:
  - MeSH Searching
  - Limit by field, publication type, age, gender, language, human or animal, etc.
  - MyNCBI Cubby – to store and update search strategies
  - Related articles
  - LinkOut + Links to Books
  - Interlibrary Loan (Loansome Doc)

TOXLINE Special (on TOXNET)

- Technical Reports and Research projects
  - Federal Research in Progress (FEDRIP)
  - Toxicology Document and Data Depository (NTIS)
  - Toxicology Research Projects (CRISP)
  - Toxic Substances Control Act Test Submissions (TSCATS)

- Special Journal and Other Research Literature
  - Developmental and Reproductive Toxicology (DART)
  - International Labour Office (CIS)
  - Swedish National Chemicals Inspectorate (RISKLINE)

TOXLINE Special (continued)

- Archival Collections (No Longer Being Updated)
  - Aneuploidy (ANEUPL)
  - Environmental Mutagen Information Center file (EMIC)
  - Environmental Teratology Information Center file (ETIC)
  - Epidemiology Information System (EPIDEM)
  - Hazardous Materials Technical Center (HMTC)
  - International Pharmaceutical Abstracts (IPA)
  - NIOSHTIC (NIOSH)
  - Pesticides Abstracts (PESTAB)
  - Poisonous Plants Bibliography (PPIB)
  - Toxicological Aspects of Environmental Health (BIOSIS)

TOXLINE Special (continued)

- Some Features of TOXLINE Special
  - Relevancy Ranking
  - Toggle between TOXLINE Special and TOXLINE Core
  - Automatic Mapping to MeSH terms
  - Link to TOXLINE Special from *ChemIDplus*
  - Related Articles

Note: Search algorithms and display formats of TOXLINE Special and TOXLINE Core vary.

Another Toxicology Literature File

Developmental and Reproductive Toxicology (DART/ETIC)

101,812 Records

- Covers Developmental and Reproductive Toxicology (including Teratology)
- Components – DART Core (on PubMed) and DART Special (on TOXNET)

Search Page - Toxicology Literature Files

- Single box Search for:
  - Chemicals – enter chemical names or CAS Registry numbers. Let system add synonyms (default) or use exact terms entered.
  - Other Terms
- Select TOXLINE Special, TOXLINE Core or both (default)
- Browse Index for:
  - All Words
  - Authors
  - MeSH Headings/Keywords
  - CAS Registry Numbers
- Automatic Term Mapping to MeSH & UMLS
  - e.g. passive smoking --- tobacco smoke pollution
- Limits
  - For more precise searching – to search within all fields, title only, author only, by specific range of years of publication, subfile, language, etc.

Search Results Page - Toxicology Literature Files

- Display title, author, source, subfile of retrieved records
- Relevancy Ranked Display
- Select Record(s) of Interest
- View Details of Search Strategy
- Modify Search – Returns you to Search Page with query intact
- Begin a new Basic Search – Returns you to Search Page with blank query box
- Or Search can be modified or begun anew directly on Results Page
- Sort Results – By year of publication, title, author, entry month, relevance, in ascending or descending order
- Save Checked Items, Display Checked Items
- View Search History and combine search statements
- Download – Brief, Full, Abstract, Tagged
- Browse Index
- Return to TOXNET Home

Selected Record Page - Toxicology Literature Files

- Display full bibliographic record – Title, Author, Source, Abstract, keywords, etc.
- Search Terms highlighted in Red
- Hot Linked Items (e.g. authors, keywords, CAS registry numbers) highlighted and underlined in Blue
- Related Records
- Return to Search Results page
- Download – Brief, Full, Abstract, Tagged
- Modify Search – Returns you to Search Screen with query intact
- Begin a new Basic Search – Returns you to search Screen with blank query box
- Or Search can be modified or begun anew directly on Results Page
- View Details of Search Strategy
- View Search History and combine search statements
- Browse Index
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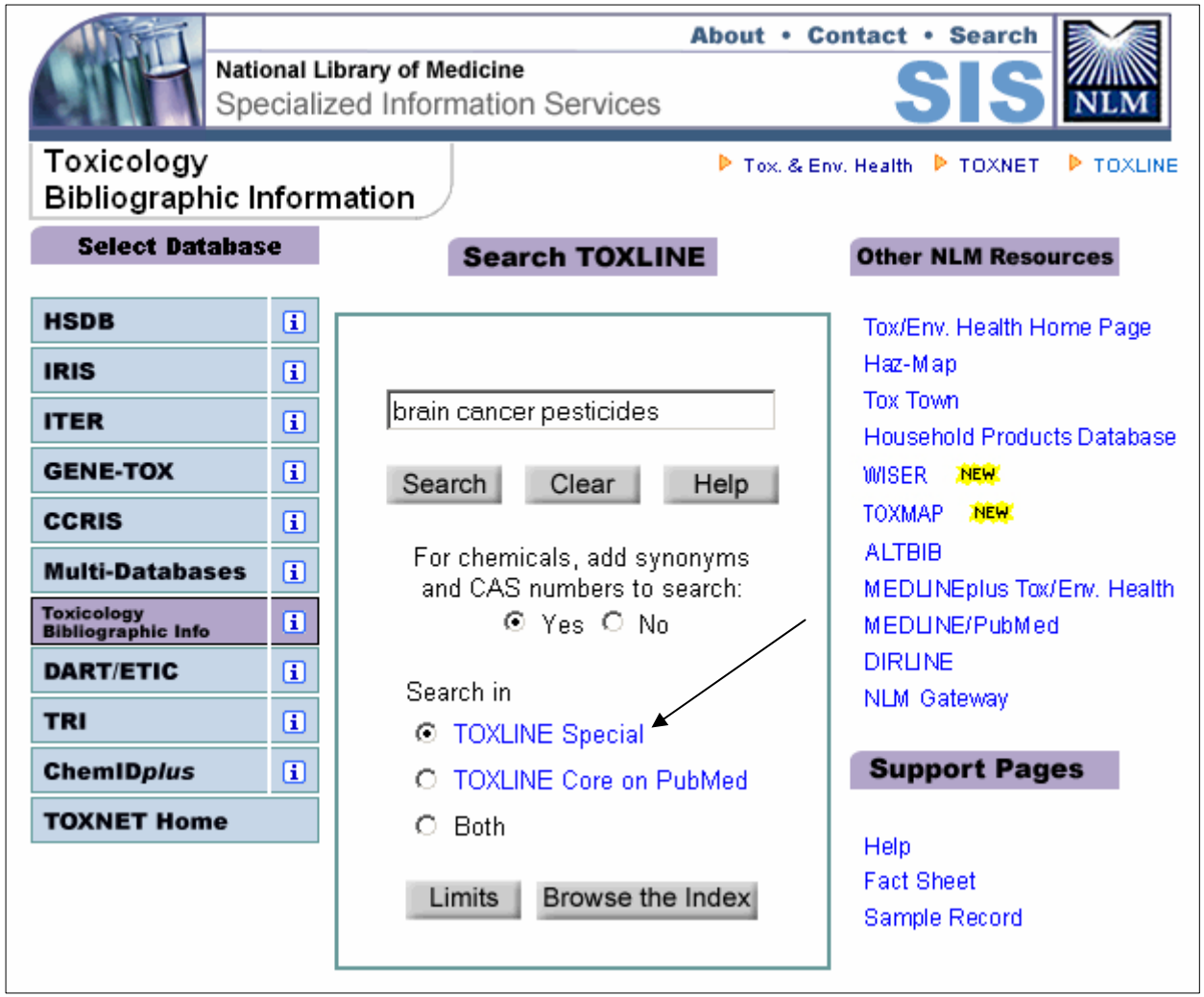
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DART/ETIC
TRI
ChemIDplus
TOXNET Home
Search TOXLINE
brain cancer pesticides
Search
Clear
Help
For chemicals, add synonyms and CAS numbers to search:
Yes
No
Search in
TOXLINE Special
TOXLINE Core on PubMed
Both
Limits
Browse the Index
Other NLM Resources
Tox/Env. Health Home Page
Haz-Map
Tox Town
Household Products Database
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brain cancer pesticides
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Limits
For chemicals, add synonyms and CAS numbers to search: Yes No
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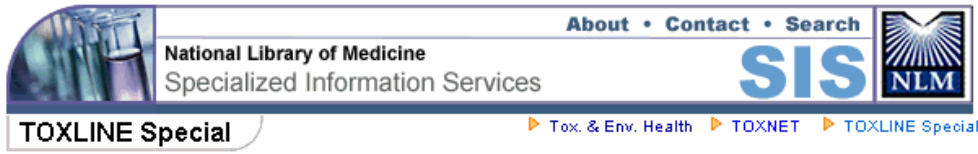
Pages: 1 2 3 4
References are sorted in relevancy ranked order.
Click on Sort to change the order of the retrieved References.
Select Record
Reference
1
Pesticide Prioritization for a Brain Cancer Case-Control Study
Sanderson WT ; Talaska G ; Zaebst D ; Davis-King K ; Calvert G
Environmental Research, Vol. 74, No. 2, pages 133-144, 28 references, 1997 [NIOSH]
2
Pesticide prioritization for a brain cancer case-control study.
SANDERSON WT ; TALASKA G ; ZAEBST D ; DAVIS-KING K ; CALVERT G
ENVIRONMENTAL RESEARCH; 74 (2). 1997. 133-144. [BIOSIS]
3
Occupational Risk Factors for Brain Tumors among Women in Shanghai, China
Heineman EF ; Gao Y-T ; Dosemeci M ; McLaughlin JK
Journal of Occupational and Environmental Medicine, Vol. 37, No. 3, pages 288-293, 22 references, 1995 [NIOSH]
4
Brain cancer mortality among French farmers: The vineyard pesticide hypothesis.
VIEL J-F ; CHALLIER B ; PITARD A ; POBEL D
ARCHIVES OF ENVIRONMENTAL HEALTH; 53 (1). 1998. 65-70. [BIOSIS]



Related Records
Search Results
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brain cancer pesticides Search Clear Limits

For chemicals, add synonyms and CAS numbers to search: Yes No

Item 1 of 57

Pesticide Prioritization for a Brain Cancer Case-Control Study

Authors:

Sanderson WT
Talaska G
Zaebst D
Davis-King K
Calvert G

Source: Environmental Research, Vol. 74, No. 2, pages 133-144, 28 references, 1997

Abstract:

Procedures used to select **pesticides** to be included in a NIOSH case control study examining the risk of **brain cancer** in farm workers in Iowa, Michigan, Minnesota, and Wisconsin associated with **pesticide** use and other environmental exposures was discussed. A procedure to identify and prioritize the **pesticides** most appropriate for the study was needed because of the large number and variety of **pesticides** available, approximately 24,000 commercially registered **pesticides**, therefore making it impossible to investigate them all. Lists of **pesticides** were created to document those used in the four states and in the US as a whole utilizing data from the US Department of Agriculture and the departments of agriculture and land grant colleges in each state. **Pesticides** were then prioritized according to the criteria: volume of use before 1985, ranking of use in the four states and the US as a whole according to **pesticide** type, and toxicologic evidence of carcinogenic, teratogenic, and mutagenic effects. The criterion '**pesticide** use before 1985' was chosen to allow a latency period of at least 10 years for **brain cancer.** The study was to be based on **brain cancer** cases diagnosed in the four states from 1985 on. A total of 240 **pesticides** were used in the four states: 102 herbicides, 81 insecticides, 32 fumigants, and 35 fungicides. Using the criteria above, the list was reduced to 56 herbicides, 49 insecticides, 17 fumigants, and 12 fungicides. The final list represented more than 99% of the total pounds of herbicides and insecticides and more than 98% of the total pounds of fungicides and fumigants used in the states before 1985. Lists of the priority **pesticides** are to be sent to the study participants before the study questionnaire is administered to allow them time to recall details of their including specific years of use and crops they were used on. The authors conclude that the procedures used to select the **pesticides** to be examined in this study are useful for documenting past **pesticide** use.

Keywords:

DCN-241835
NIOSH Author
Agricultural chemicals
Occupational exposure
Epidemiology
Brain tumors
Risk analysis
Information systems
Agricultural workers

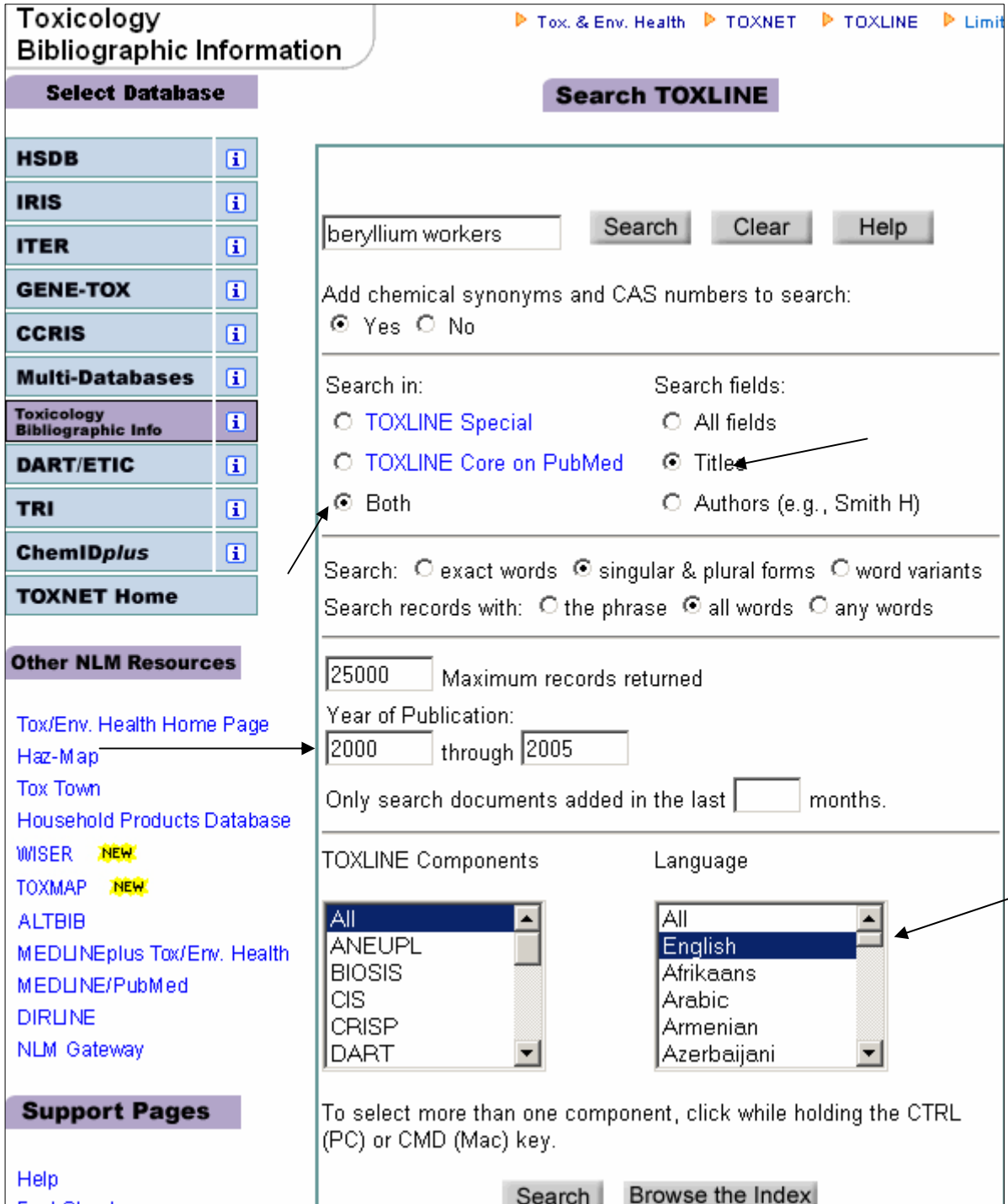
Coden:

ENVRAL

Entry Month: October, 1998

Year of Publication: 1997

Secondary Source ID: NIOSH/00241410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Search fields:
All fields
Title
Authors (e.g., Smith H)
Search: exact words
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any words
25000
Maximum records returned
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through
2005
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months.
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ANEUPL
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CIS
CRISP
DART
Language
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Armenian
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ROSSMAN M
Crisp Data Base National Institutes of Health [CRISP]
2
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ROSSMAN M
3
CHRONIC BERYLLIUM DISEA
ROSSMAN M
4
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American Journal of Industrial M
NCBI
PubMed
National Library of Medicine
NLM
Entrez PubMed Nucleotide Protein Genome Structure OMIM PMC Journals Books
Search PubMed for beryllium[TI] workers[TI] AND 2000:2004[dp] AN Go Clear
Limits Preview/Index History Clipboard Details
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Text Version
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Single Citation Matcher
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Clinical Queries
LinkOut
Cubby
Related Resources
Order Documents
Display Summary Show: 20 Sort Send to Text
Items 1-5 of 5
One page.
1: Horng CJ, Horng PH, Lin SC, Tsai JL, Lin SR, Tzeng CC. Related Articles, Links
Determination of urinary beryllium, arsenic, and selenium in steel production workers.
Biol Trace Elem Res. 2002 Sep;88(3):235-46.
PMID: 12350133 [PubMed - indexed for MEDLINE]
2: Deubner DC, Lockey JL, Kotin P, Powers MB, Miller F, Rogers AE, Trichopoulos D. Related Articles, Links
Re: Lung cancer case-control study of beryllium workers. Sanderson WT, Ward EM, Steenland K, Petersen MR. Am. J. Ind. Med. 2001. 39:133-144.
Am J Ind Med. 2001 Sep;40(3):284-8. No abstract available.
PMID: 11598976 [PubMed - indexed for MEDLINE]
3: Henneberger PK, Cumro D, Deubner DD, Kent MS, McCawley M, Kreiss K. Related Articles, Links
Beryllium sensitization and disease among long-term and short-term workers in a beryllium ceramics plant.
Int Arch Occup Environ Health. 2001 Apr;74(3):167-76.
PMID: 11355290 [PubMed - indexed for MEDLINE]

Part V

TRI, Specialty Files, New Initiatives

Toxics Release Inventory (TRI)
U.S. Environmental Protection Agency (EPA)

TRI 87-02 (16 years) – 1,368,680 Records

- Facility Identification (Facility Name, Address, Phone, etc.)
- Substance Identification (Chemical Name, CAS RN, Uses, etc.)
- Environmental Release of Chemical (in Air, Water, Land, Underground Injection)
- Waste Treatment
- Off-Site Waste Treatment
- Source Reduction and Recycling (Quantity Released, Energy Recovery, Quantity Recycled, Quantity Treated)

TRI Background

- Right-to-Know Movement – Workplace, Community
- OSHA Hazard Communication Standard – 1983
- SUPERFUND = CERCLA (1980)
- Bhopal (1984) and smaller scale chemical disasters
- SARA (Superfund Amendments and Reauthorization Act) (1986)
  - Title 3 = Emergency Planning and Community Right-to-Know Act
    - Section 313 = Toxic Release Reporting
- Pollution Prevention Act of of 1990

Search Page - TRI

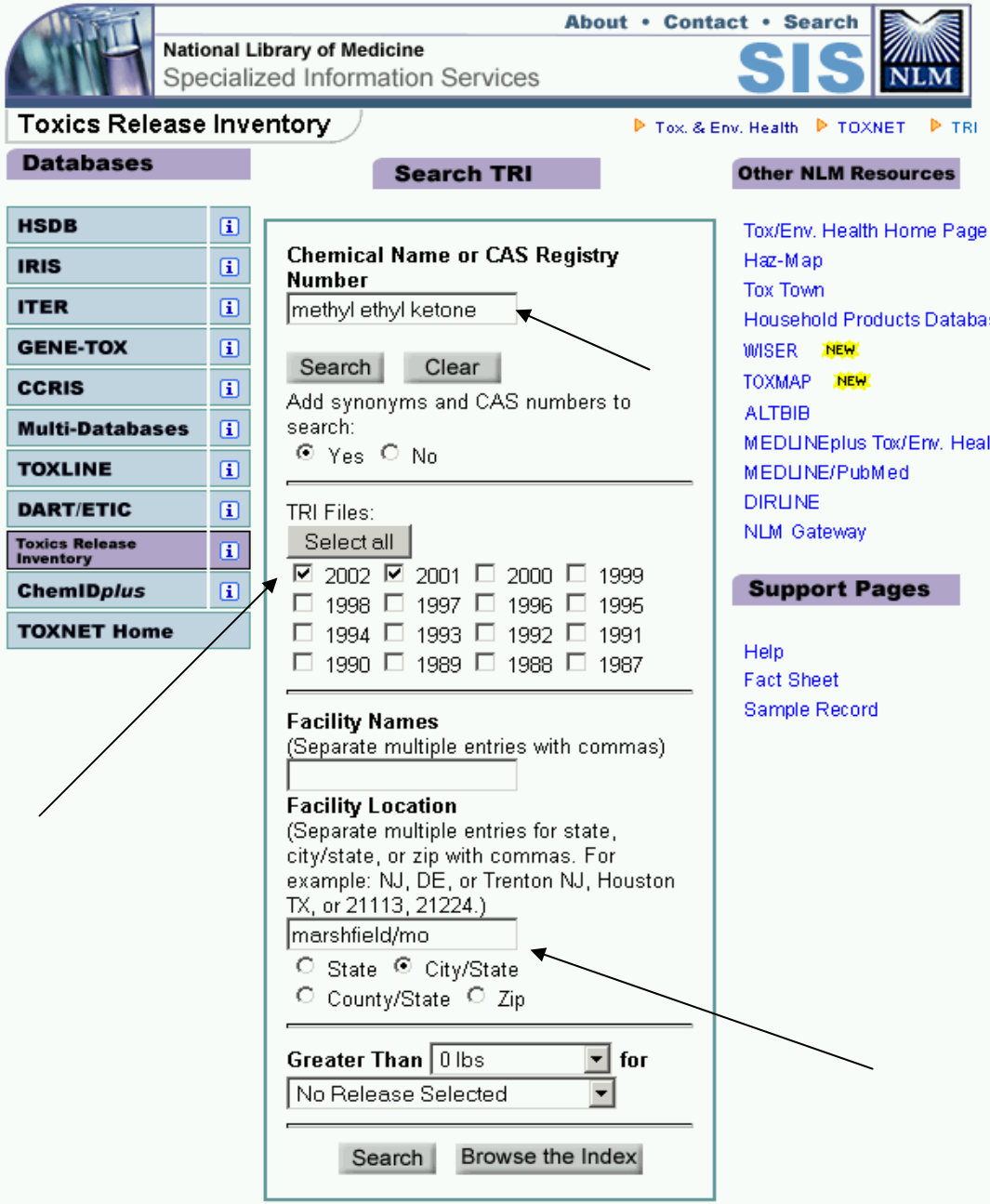
- Several search query boxes – fill in any combination.
- Chemical names or CAS Registry numbers. Let system add synonyms (default) or use exact terms entered.
- Select Year(s) – 1987-2002
- Facility Name(s)
- Facility Location (state, city/state, county/state, zip)
- Ranging
  - Greater than _____ pounds
  - Total Release, Air, Water, Land, Underground Injection
  - Or “No Release Selected”
- Browse Index for:
  - All Words
  - Chemical Name
  - CAS Registry Number
  - Facility Name
  - Facility City

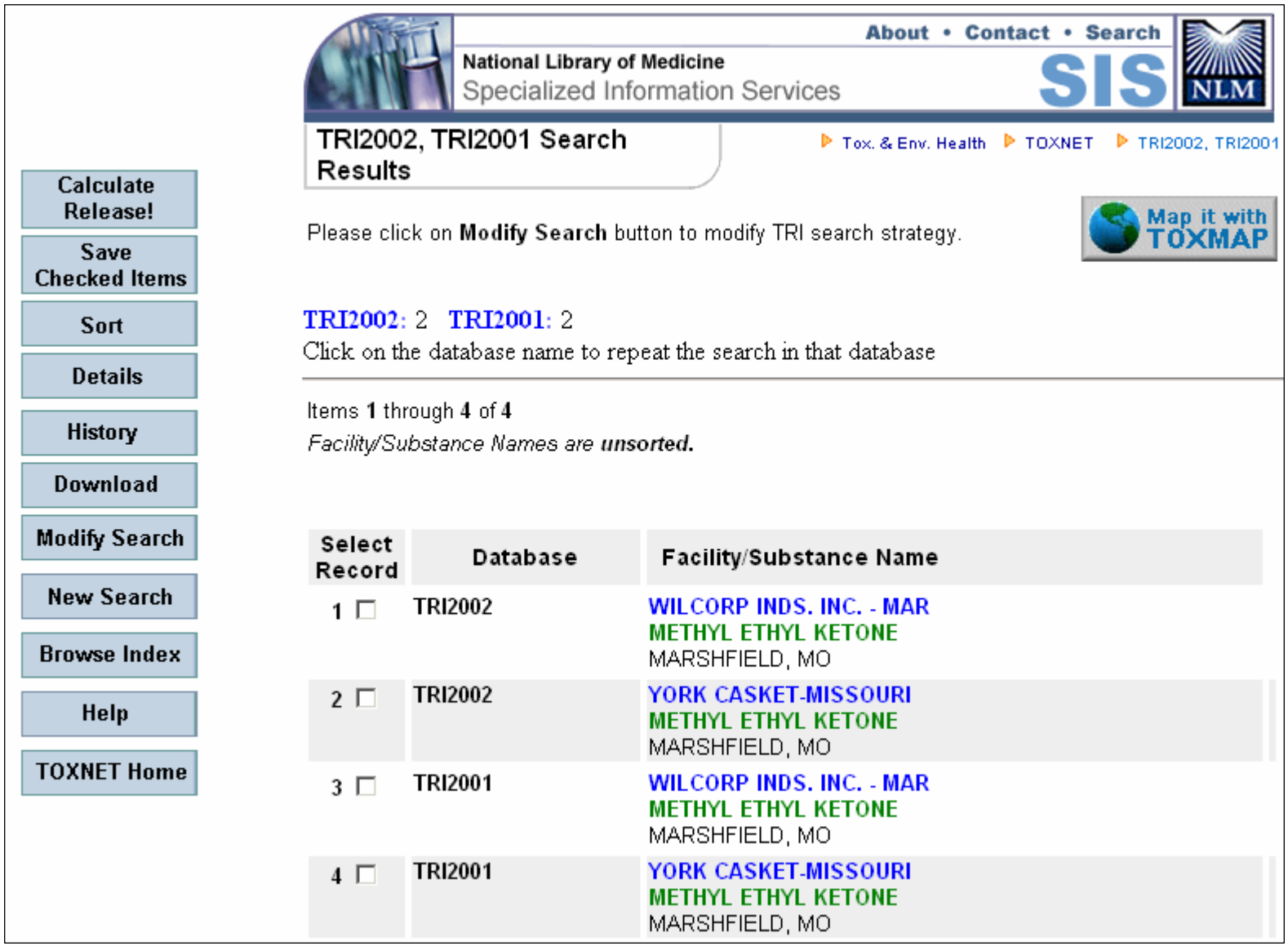
Search Results Page - TRI

- Displays facility name, chemical, city/state of retrieved records.
- Unsorted order
- Select Record(s) of Interest
- Calculate Releases – Tabular Display of Total Environmental Releases and Off-Site Waste Transfers for all retrieved records.
- View Details of Search Strategy
- Modify Search – Returns you to Search Page with query intact
- Begin a new Basic Search – Returns you to Search Page with blank query box (note: search screen can't be modified directly from this page)
- Sort Results – By substance name, facility name, city, or state. Ascending or Descending.
- Save Checked Items, Display Checked Items
- View Search History and combine search statements
- Download – Brief or Full Format
- Browse Index
- Get Help
- Return to TOXNET Home

Selected Record Page - TRI

- Display full record
- Choose fields for display from Contents (expand, contract categories)
- Navigate – Next Item, Previous Item
- View Details of Search Strategy
- Modify Search – Returns you to Search Screen with query intact
- Begin a New Search – Returns you to Search Screen with blank query box
- Browse Index
- Get Help
- Download – In Full Format
- Return to TOXNET Home
- Link to records for the same chemical in Other Files - (including TOXLINE and ChemIDplus

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Please click on Modify Search button to modify TRI search strategy.
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Click on the database name to repeat the search in that database
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METHYL ETHYL KETONE
MARSHFIELD, MO
2
TRI2002
YORK CASKET-MISSOURI
METHYL ETHYL KETONE
MARSHFIELD, MO
3
TRI2001
WILCORP INDS. INC. - MAR
METHYL ETHYL KETONE
MARSHFIELD, MO
4
TRI2001
YORK CASKET-MISSOURI
METHYL ETHYL KETONE
MARSHFIELD, MO

Map it with TOXMAP

TRI2002

METHYL ETHYL KETONE
YORK CASKET-MISSOURI
MARSHFIELD, MO

For other data, click on the Table of Contents

Environmental Release of Chemical:

Non-Point Air Emissions Estimates:
Non-Point Air Release: 2,500 lbs./rep yr. 2002
Basis of Estimate: (C) Mass Balance Calculations

Point Air Emissions Estimates:
Point Air Release: 22,400 lbs./rep yr. 2002
Basis of Estimate: (C) Mass Balance Calculations

Total Air Release: 24,900 lbs./rep yr. 2002

Water Discharge Estimates:
Receiving Stream: NA
Water Release: NA

Total Water Release: 0 lbs./rep yr. 2002

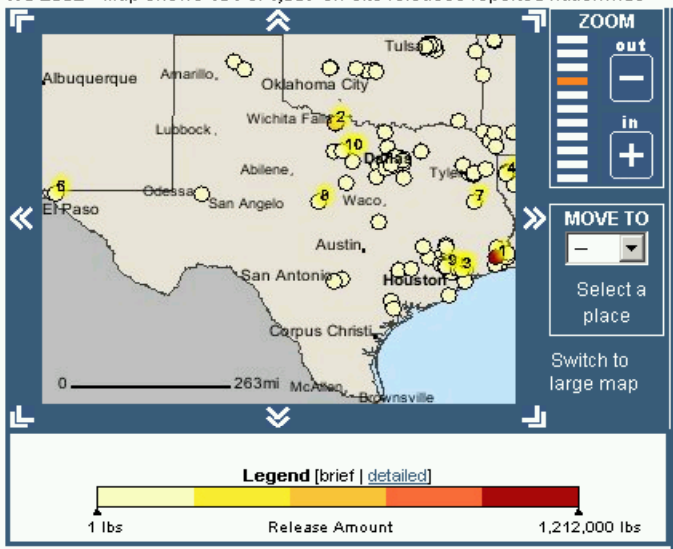
Underground Injection Total: 0 lbs./rep yr. 2002

Land Release Estimates:
Disposal Method: (D99) Other Disposal
Land Release: NA

METHYL ETHYL KETONE (78-93-3)

TRI-2002 - Map shows **134** of **1,557** on-site releases reported nationwide

Print this map



Facilities reporting to TRI

Hide list

Page 1 of 14

(134 releases total)

1. EXXONMOBIL OIL BEAUMONT REFY.
2. TEXAS RECREATION CORP.
3. EXXONMOBIL REFINING & SUPPLY BAYTOWN REFY.
4. CALUMET LUBRICANTS CO. SHREVEPORT REFY.
5. EQUILON LUBRICANTS CO. DEER PARK
6. U.S. ARMY AIR DEFENSE ARTILLERY CENTER & FORT BLISS
7. JM CLIPPER CORP.
8. 3M CO. BROWNWOOD
9. SOUTHLINE METAL PRODS. CO.
10. AERO-MARINE ENG. INC.

Chemical
Reference Info
HSDB
- Human Health Effects
- Manufacturing/Use Info
- Env. Fate / Exposure

ATSDR
- ToxFAQs & Public Health Statements
- Public Health Assessments
- General Documents

Chemical & Map Area
Toxicology Biblio. Info
Search: chemical & places
- ☑ TOXLINE Special
- ☑ TOXLINE Core on PubMed

Questions
- How accurate is TRI data?
- How accurate are TRI locations in TOXMAP?
- Whom do I contact with questions and/or suggestions?

more...

Map Options

- Show/hide map data (e.g. Census Demographics, cities, roads)
- Search for another chemical
- Start over

1. EXXONMOBIL OIL BEAUMONT REFY.

EPA Facility Number: 77701BMNTREASTE top

1795 BURT STREET
BEAUMONT, TX 77704

Emissions Estimates:
METHYL ETHYL KETONE

Environmental Medium	(lbs./rep yr. 2002)
Air	1,212,000
TOTAL	1,212,000

- Details about this release
- All chemicals reported by this facility

2. TEXAS RECREATION CORP.

EPA Facility Number: 76305TXSRC908NO top

908 N. BEVERLY DR.

Search as Agent Disease Job Text Search

Haz-Map Search | More Searches | Haz-Map Help | Glossary | References

Browse Haz-Map

- **Hazardous Agents**
  1. By Types of Agents
  2. By Adverse Effects
  3. Alphabetically
- **Occupational Diseases**
  1. By Types of Diseases
  2. By **Jobs** and **Symptoms**
  3. Alphabetically
- **High Risk Jobs**
  1. By Types of Jobs
  2. Alphabetically

Haz-Map: Information on Hazardous Chemicals and Occupational Diseases
by
Jay A. Brown, M.D., M.P.H.

Haz-Map Fact Sheet | Download Haz-Map Brochure | List of All Topics

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Last updated: July 22, 2004

Search carpenters as Agent Disease Job Text Search

Haz-Map Search | More Searches | Haz-Map Help | Glossary | References

Browse Haz-Map Search TOXNET

Search results: 3 record(s) found in Jobs table.

- Cabinetmakers & Bench Carpenters
- Carpenters
- Helpers--Carpenters

Haz-Map Search | More Searches | Haz-Map Help | Glossary | References

Browse Haz-Map — Search TOXNET

Disease/Syndrome	Nasal sinus cancer
Category	Cancer, Occupational
Acute/Chronic	Chronic
Comments	A sentinel health event (occupational) associated with exposure to hardwood dusts (woodworkers, cabinet and furniture makers); radium (radium processors, dial painters); chromates (producers, processors & users); nickel (smelting & refining); chlorophenols (sawmill workers & carpenters); and an unknown agent (boot & shoe industry); [Mullan] Agents associated with sino-nasal cancer include cigarette smoking, wood and leather dust, nickel refining, chromates, mustard gas manufacturing, isopropanol manufacturing, and possibly welding. [LaDou, p. 296] Softwood dust is associated with squamous cell carcinoma, and hardwood dust is associated with adenocarcinoma of the nasal cavity. An increased risk exists for sawmill workers, furniture workers, wood products workers, and carpenters. No increased risk exists for workers in foresty, logging, or paper and pulp. [Dement J. Wood Dust. In: Bingham E, Cohrssen B, Powell C, eds. Patty's Toxicology, 5th ed. New York: John Wiley & Sons; 2001:619-49] Seventy percent of patients with sinonasal adenocarcinoma reported in Denmark between 1965 and 1974 had worked for many years in wood-working jobs. [Skov T, Mikkelsen S, Svane O, Lynge E. Reporting of occupational cancer in Denmark. Scand J Work Environ Health 1990;16:401-5]
Latency/Incubation	Years to decades
Diagnostic	Biopsy
ICD-9 Code	160.0

Haz-Map Search | More Searches | Haz-Map Help | Glossary | References

Browse Haz-Map — Search TOXNET

Agent Name	Wood dust, all soft and hard woods
Major Category	Biological Agents
Category	Wood Dusts & Extracts
Description	Dust from various types of wood;
Comments	Softwood dust is associated with squamous cell carcinoma, and hardwood dust is associated with adenocarcinoma of the nasal cavity. An increased risk for nasal sinus cancer exists for sawmill workers, furniture workers, wood products workers, and carpenters. No increased risk exists for workers in foresty, logging, or paper and pulp. [Dement J. Wood Dust. In: Bingham E, Cohrssen B, Powell C, eds. Patty's Toxicology, 5th ed. New York: John Wiley & Sons; 2001:619-49] The nontropical woods such as white pine rarely cause allergic contact dermatitis in carpenters. [Marks, p.314] "Occupational asthma due to Western red cedar dust exposure is the most common type of occupational asthma in the Pacific Northwest." [Chan-Yeung & Malo, 1994] There are many other wood dusts that can cause asthma including oak, mahogany, African maple, Central American walnut, ash, ebony, cinnamon, etc. IARC classifies hardwoods as human carcinogens.
Exposure Assessment	
Skin Designation (ACGIH)	No
TLV (ACGIH)	1 mg/m3(beech and oak hardwood), 5 mg/m3(softwood)
STEL (ACGIH)	10 mg/m3(softwood)
Explanatory Notes	Notice of Intended Change (for 2002): TLV = 2 mg/m3 for nonallergenic and noncarcinogenic wood dust, 0.5 mg/m3 for Western red cedar, and 1mg/m3 for other respiratory allergenic wood dust, birch, mahogany, teak, walnut, oak and beech; [ACGIH]
Adverse Effects	
IARC Carcinogen	Known Carcinogen

Haz-Map Search | More Searches | Haz-Map Help | Glossary | References

Browse Haz-Map — Search TOXNET

Job Name	Carpenters
Definition	Construct, erect, install, or repair structures and fixtures made of wood, such as concrete forms; building frameworks, including partitions, joists, studding, and rafters; wood stairways, window and door frames, and hardwood floors. May also install cabinets, siding, drywall and batt or roll insulation. Include brattice builders who build doors or brattices (ventilation walls or partitions) in underground passageways to control the proper circulation of air through the passageways and to the working places. [SOC] "The nontropical woods (e.g., white pine) used by carpenters rarely cause allergic contact dermatitis." [Marks, p. 314]
Category	Construction
SOC Code	47-2031

Haz-Map Search | More Searches | Haz-Map Help | Glossary | References

Browse Haz-Map — Search TOXNET

Industry Name	Finish Carpentry Contractors
Comments	Carpenters and joiners had increased risk for nasal cancer and Hogkin's lymphoma from wood dust and solvents. [BC Cancer Agency]
Description	This industry comprises establishments primarily engaged in finish carpentry work. The work performed may include new work, additions, alterations, maintenance, and repairs.
Category	Construction
NAICS Code	238350
Related Information in Haz-Map	
Job Tasks	High risk job tasks associated with this industry: • Apply arsenic preservatives to wood • Installed insulation before 1975 • Machine allergenic wood and inhale dust • Remove insulation installed before 1975 • Remove lead coatings • Saw or sand arsenic-treated wood • Spray epoxy or polyurethane paint, shellac, lacquer, or varnish • Use epoxy, isocyanate, or formaldehyde-resin adhesives, finishes, or sealants • Use n-hexane as a solvent in glues, coatings, or degreasers • Use polyfunctional aziridine hardener in paints, varnishes, or other coatings

Household Products Database

National Institutes of Health
National Library of Medicine
Specialized Information Services

NLM

Home | Products | Ingredients | MSDS

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Health & Safety Information on Household Products

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- Material Safety Data Sheet (MSDS)

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What's under your kitchen sink, in your garage, in your bathroom, and on the shelves in your laundry room? Learn more about what's in these products, about potential health effects, and about safety and handling.

Information in the Household Products Database is taken from a variety of publicly available sources, including brand-specific labels and Material Safety Data Sheets (MSDS) prepared by manufacturers.

Find a product...

For advice if someone is poisoned, call your local Poison Center at (1-800-222-1222).

Household Products Database

National Institutes of Health
National Library of Medicine
Specialized Information Services

NLM

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Auto Products

Brake Fluid, De-icer, Lubricant, Sealant, and more...

Inside the Home

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Pesticides

Animal Repellant, Fungicide, Herbicide, Insecticide, and more...

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Last updated: May 12, 2004

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Search: old spice shave cr as Brand Name in All Product Categories Go

Brand Information

Brand Name: Old Spice Shave Cream
Form: aerosol foam
Product Category: Personal care/use >> Men's Products >> shaving cream/gel
Customer Service No.: 800-262-1637
Date Entered: 2001-05-31
Related Items: Products with similar usage in this database

Manufacturer

Manufacturer: Procter & Gamble Co.
Address: P.O. Box 599
City: Cincinnati
State: OH
Zip Code: 45201
Telephone Number: 513-983-1100
Fax Number: 513-562-4500
Toll Free Number: 800-543-7270
Date Info Verified: 2003-01-01
Related Items: Products by this manufacturer

Health Effects

Search TOXNET

The following information (Health Effects, Handling/Disposal, and Ingredients) is taken from the product label and/or the Material Safety Data Sheet (MSDS) prepared by the manufacturer. The National Library of Medicine does not evaluate information from the product label or the Material Safety Data Sheet.

Acute Health Effects: From MSDS:
ROUTES OF ENTRY: Skin, oral, eye, inhalation
HEALTH HAZARDS (ACUTE AND CHRONIC): Acute - eye: mild transient irritation; oral: gastrointestinal irritation.
Chronic - N/K

SIGNS OF SYMPTOMS OF EXPOSURE: Eye - transient burning/stinging/tearing
Oral - nausea, vomiting, diarrhea

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: N/K

Chronic Health Effects: MSDS: Chronic: None known
Carcinogenicity: The manufacturer's Material Safety Data Sheet (MSDS) does not address the subject of carcinogenicity.
First Aid: MSDS: EMERGENCY AND FIRST AID PROCEDURES: Eye - flush with water for 15 minutes; Oral - dilute with fluids; Skin - rinse thoroughly with water.
Health Rating: N
Flammability Rating: N
Reactivity Rating: N
HMIS Rating Scale: 0 = Minimal; 1 = Slight; 2 = Moderate; 3 = Serious; 4 = Severe;
N = No information provided by manufacturer; * = Chronic Health Hazard
MSDS Date: 1998-08-19

Handling/Disposal

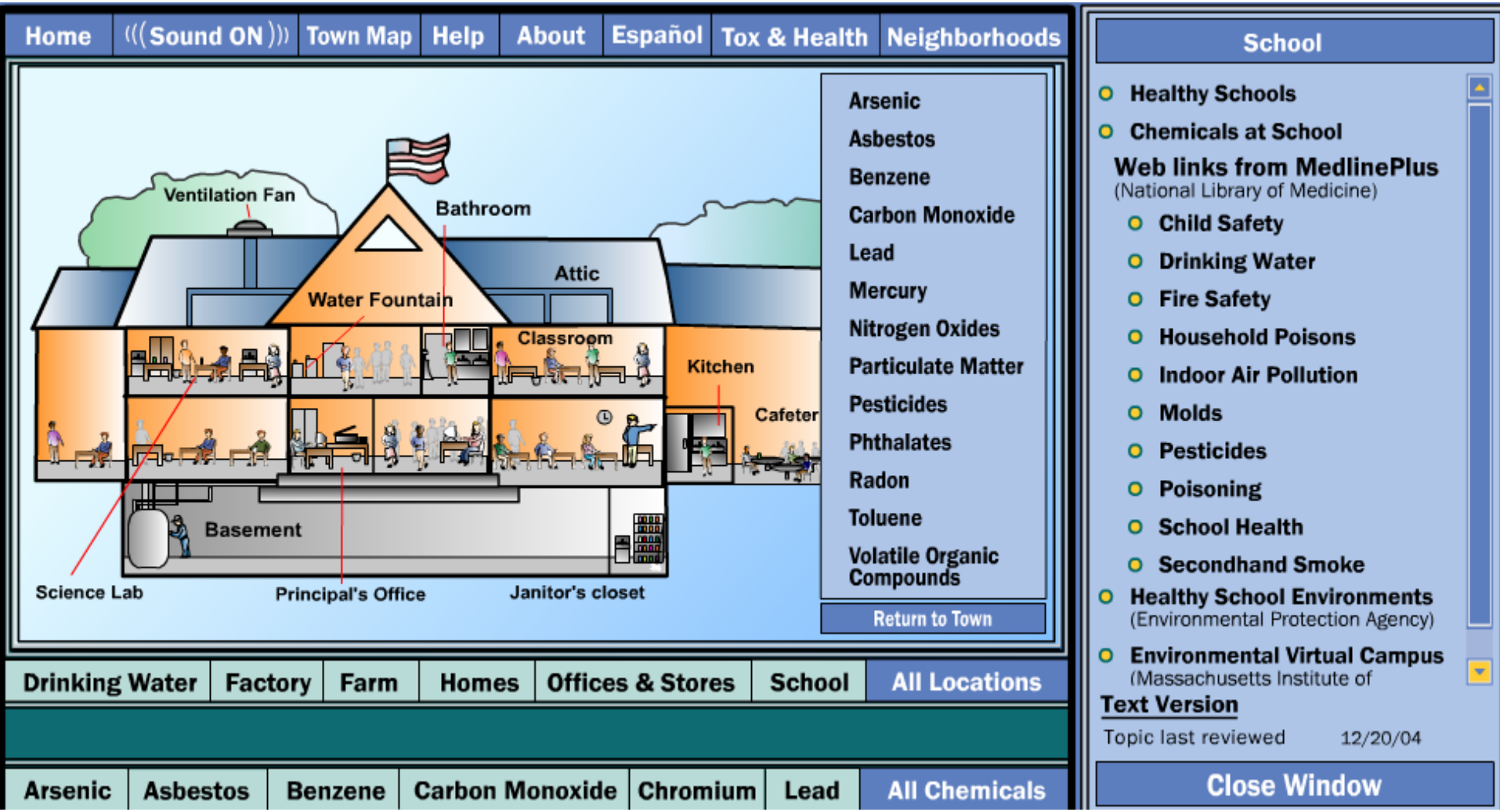
Handling: MSDS: PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING:
Store in a cool dry area in a properly labeled, tightly closed container.
OTHER PRECAUTIONS: Do not expose to heat or ignition source.

Disposal: MSDS: WASTE DISPOSAL METHOD:
Dispose in accordance with local, state, and Federal regulations.

Ingredients from MSDS/Label

Chemical	CAS No / Unique ID	Percent
Isobutane	000075-28-5	
Butane	000106-97-8	
Propane	000074-98-6	
Fragrance(s)/perfume(s)	000000-00-1	
Lanolin	008006-54-0	
Stearic acid	000057-11-4	
Triethanolamine	000102-71-6	
Sodium lauryl sulfate (SLS)	000151-21-3	
Laureth-23	999999-11-0	
Methylparaben	000099-76-3	
Aloe extract	008001-97-6	
Water	007732-18-5	

TOX-TOWN


Home
Sound ON
Town Map
Help
About
Español
Tox & Health
Neighborhoods
Ventilation Fan
Bathroom
Attic
Water Fountain
Classroom
Kitchen
Cafeter
Basement
Science Lab
Principal's Office
Janitor's closet
Arsenic
Asbestos
Benzene
Carbon Monoxide
Lead
Mercury
Nitrogen Oxides
Particulate Matter
Pesticides
Phthalates
Radon
Toluene
Volatile Organic Compounds
Return to Town
Drinking Water
Factory
Farm
Homes
Offices & Stores
School
All Locations
Arsenic
Asbestos
Benzene
Carbon Monoxide
Chromium
Lead
All Chemicals
School
Healthy Schools
Chemicals at School
Web links from MedlinePlus
(National Library of Medicine)
Child Safety
Drinking Water
Fire Safety
Household Poisons
Indoor Air Pollution
Molds
Pesticides
Poisoning
School Health
Secondhand Smoke
Healthy School Environments
(Environmental Protection Agency)
Environmental Virtual Campus
(Massachusetts Institute of
Text Version
Topic last reviewed 12/20/04
Close Window

World Library of Toxicology, Chemical Safety, and Environmental Health

Home | North America | South America | Europe | Asia | Middle East | Africa | Oceania | Antarctica

Enter country name or other term(s):

Search

Or click on map below:

Select a country

Select an organization

TEHIP | GINC | RESOURCES | GLOBALERT

Specialized Information Services, U.S. National Library of Medicine
8600 Rockville Pike, Bethesda, MD 20894
National Institutes of Health, Department of Health and Human Services

Last updated: July 1, 2004

Enviro-Health Links - Education, Careers, and Outreach

More to Explore

Environmental Health Information Outreach

ToxTutor

Tox Web Links

This Web site aggregates resources related to toxicology and environmental health education, its study and teaching, career paths and opportunities, including accreditation, and outreach for the public.

Academic Program Directories

{Formal undergraduate and graduate on - site programs leading to degrees}

- Graduate Programs in Toxicology
  - Academic and Post - Doctoral Programs and Web Sites
    {U.S. Society of Toxicology}

More to Come

- HSDB Automated Indexing
- TOX TOWN Expansion – More Views
- World Library of Toxicology, Chemical Safety, and Environmental Health
- Revision of Tox-Tutor
- General Revival of Drug-Related Information
- Drugs and Lactation Database
- Endocrine Toxicology Database – Silent Spring Institute
- Collaboration on Environmental Health Nomenclature
- Environmental Information Coalition/Earth Portal
- Public Health Law Information Project
- TOX-SEEK – Multi-Resource Search Engine

Part VI

Non-NLM Resources

Professional Associations

- Society of Toxicology – http://www.toxicology.org/
- Society of Environmental Toxicology and Chemistry – http://www.setac.org
- American Academy of Clinical Toxicology – http://www.clintox.org
- American Association of Poison Control Centers – http://www.aapcc.org
- Society of Risk Analysis – http://www.sra.org
- Other groups in environmental health, occupational health, industrial hygiene, health physics etc.

U.S. Government Resources

- Agency for Toxic Substances and Disease Registry (ATSDR) – http://www.atsdr.cdc.gov
- Environmental Protection Agency (EPA) – http://www.epa.gov
- Food and Drug Administration – http://www.fda.gov
  - National Center for Toxicological Research – http://www.fda.gov/nctr
- National Institute for Occupational Safety and Health – http://www.cdc.gov/niosh

U.S. Government Resources (continued)

- National Institute of Environmental Health Sciences – http://www.niehs.nih.gov
- National Toxicology Program – http://ntp-server.niehs.nih.gov
- U.S. Chemical Safety and Hazard Investigation Board – http://www.csb.gov

Some State Government Sites

- New Jersey Department of Health and Senior Services – Division of Epidemiology, Environmental and Occupational Health – http://www.state.nj.us/health/eoh
- California – Office of Environmental Health Hazard Assessment – http://www.oehha.ca.gov

Some Chemical Databases

- Chemfinder – http://www.chemfinder.com
- Scorecard (from Environmental Defense) – http://www.scorecard.org
- Environmental Fate Databases & more (from Syracuse Research Corporation) –http://www.syrres.com/esc/efdb.htm
- EXTOXNET (pesticide information) – http://ace.orst.edu/info/extoxnet

Some Chemical Databases (continued)

- PAN (Pesticide Action Network) Pesticides Database – http://www.pesticideinfo.org
- Where to Find Material Safety Data Sheets on the Internet – http://www.ilpi.com/msds
- RxList, the Internet Drug Index – http://www.rxlist.com
- International Programme for Chemical Safety (IPCS) INCHEM – http://www.inchem.org/

Also Consider:

- Scirus - Elsevier Science - http://www.scirus.com/

Other Web Sites

- UNEP (United Nations Environment Programme) Chemicals – http://www.chem.unep.ch
- Intergovernmental Forum on Chemical Safety - http://www.who.int/ifcs/
- Inter-Organization Programme for the Sound Management of Chemicals - http://www.who.int/iomc/
- National Council for Science and the Environment – http://www.ncseonline.org
- Society of Environmental Journalists – http://www.sej.org
- TEHIP/NLM Web Links – http://sis.nlm.nih.gov/Tox/ToxWebLinks.html

Some Commercial ($) Databases

- ARIEL Insight – Ariel Research – http://www.arielresearch.com
- BIOSIS Previews – BIOSIS – http://www.biosis.org
- Chemical Abstracts & CAS Registry – Chemical Abstracts Service – http://www.cas.org (also http://stnweb.cas.org)
- CCINFOweb (CHEMINDEX &IPCS/INCHEM are free) – CCOHS – http://www.ccohs.ca
- CIS Database (on occupational health) (from the International Labour Office) (free as a TOXLINE subfile) – http://www.ilo.org/public/english/protection/safework/cis/products/cisdoc.htm

Some Commercial ($) Databases (continued)

- EMBASE – Elsevier Science – http://www.embase.com
- Environment Abstracts – Congressional Information Service – available from Dialog - http://www.dialog.com/
- MICROMEDEX Databases – MICROMEDEX – http://www.micromedex.com
- Science Direct - Elsevier - http://www.sciencedirect.com/
- Toxicology Abstracts – Cambridge Scientific Abstracts – http://www.csa.com
- Web of Science – ISI – http://www.isinet.com/

Some Web Search Engines and Tools

- AltaVista – http://www.altavista.com
- Google – http://www.google.com
- Hotbot – http://www.hotbot.com
- Yahoo – http://www.yahoo.com
- Meta Search Engines
  - Go2Net – http://www.go2net.com
  - Dogpile – http://www.dogpile.com
  - Ask Jeeves – http://www.ask.com
- Searchenginewatch – http://www.searchenginewatch.com
- Mailing List Directories – CATALIST - http://www.lsoft.com/lists/listref.html

TOXNET Exercises

[Note: There is typically more than one "right" approach to answering each of the following questions. Answers, where they are provided, are merely representative, not definitive. Explore.]

TOXICOLOGY DATA FILES

1. What is the CAS registry number and octanol/water partition coefficient of 2,6-dinitrotoluene and what is this chemical used for? [HSDB]

   In HSDB, search for **2,6-dinitrotoluene** and click on the 2,6-dinitrotoluene record on the Search Results Page. In the Table of Contents, expand **Chemical/Physical Properties** and click on **Octanol/Water Partition Coefficient**. Expand **Manufacturing/Use Information** and click on **Major Uses**.

2. Has 2,6-dinitrotoluene been shown to be mutagenic in the Ames salmonella test? [HSDB]

   MODIFY above search to **2,6-dinitrotoluene ames,** and click on **2,6-dinitrotoluene** record.
   Note: You may also wish to check other files, such as GENE-TOX and CCRIS.

3. What is the oral LD50 of caffeine in male rabbits? Also, click on **DETAILS** to view the search strategy. [HSDB]

   Search for **oral ld50 caffeine male rabbits** and click on **caffeine** record.
   Note: On target hit displays first.

4. Has caffeine been studied as a tumor promoter? Does it cause mutations? [CCRIS, GENE-TOX]

   From HSDB caffeine record (above), click on **Other Files**. Select CCRIS. Expand Studies data in Table of Contents and check the boxes for **Tumor Promotion Studies** and **Mutagenicity Studies.** Return to HSDB. Click on **Other Files** again and select GENE-TOX. **Select Mutagenicity Studies**.

5. Which of the toxicology data files contain information on ammonia? What is the Inhalation Reference Concentration (RfC) of ammonia? (Note: the RfC is a non-carcinogenic risk assessment parameter) Also, view the DOWNLOAD options available. [Multi-Data Base and IRIS]

   Select the **Multi-Database** option on the TOXNET main page. Search for **ammonia**. Click on the IRIS ammonia record. Expand **Chronic Health Hazard Assessment for Noncarcinogenic Effects** in Table of Contents. Click on **Reference Concentration for Chronic Inhalation Exposure (RfC)**.

TOXNET Exercises (continued)

6. What are some chemicals used in leather tanning and what are their human health effects? [HSDB]

   Use the **limits** option of HSDB. Search for **leather tanning** in HSDB. Expand **Manufacturing/Use Information** and check the box for **Major Uses**. Click on several retrieved chemical records to view their "best sections" and click on **Human Health Effects** for these records in the Table of Contents.

7. Does nitrobenzene have any effect on sperm? Find some recent general articles on nitrobenzene. [HSDB, TOXLINE Core]

   Search for **nitrobenzene sperm** in HSDB. Click on nitrobenzene record and view **Best Sections.** Click on **Other Files and** click on **TOXLINE Core.**

8. How does the U.S. Environmental Protection Agency characterize the carcinogenicity of methylmercury? [IRIS]

   Search for **methylmercury** in IRIS and select the methylmercury record on the Search Results page. Expand category **II. Carcinogenicity Assessment for Lifetime Exposure**. Click on **II.A. Evidence for Human Carcinogenicity**.

9. Find any information on the occurrence or effects of methyl parathion in soil. Search using the chemical's CAS Registry Number – 298-00-0. [HSDB]

   Search HSDB for **298-00-0 soil** in the query box and scan the **Best Sections** of the methyl parathion record.

10. How do the Dutch RIVM (National Institute for Public Health and the Environment) and the U.S. EPA compare in their non-cancer oral risk values for chloroform? [ITER]

    Search for **chloroform**. View **Risk Data: Non-Cancer Oral Table**.

11. Use Boolean operators and phrase searching to look for information on lung cancer or bladder cancer in workers, in HSDB.

    Enter – **("lung cancer" [htox] OR "bladder cancer" [htox]) AND worker**

TOXNET Exercises (continued)

TOXICOLOGY LITERATURE FILES

1. Search TOXLINE Special for articles by C.N. Pope. Sort retrieval by primary author names. [TOXLINE Special]

   Search for "pope cn" in query box. On "Search Results" page, click on "SORT" button and sort by author.

2. Search TOXLINE Special and TOXLINE Core for phosphoric acid. Explore navigating through your retrieval, examining individual records, and going to linked records. [TOXLINE Special & Core]

   Search for **phosphoric acid** in query box. Click on **Details** buttons in both databases to view the respective search strategies. Navigate the pages. Click on records of interest and on hot-linked data – e.g. keywords, author names, CAS registry numbers. Check for related records.

3. Find articles focused on the effects of diet on breast cancer. [TOXLINE Special & Core]

   Try a **Limits** search. Enter **diet breast cancer** in the query box. Limit to **Titles.** Select **Both** TOXLINE Special and TOXLINE Core.

4. Find journal references on the treatment of arthritis by the anti-inflammatory agent Celebrex. [TOXLINE Core]

   Search for **arthritis celebrex** in the query box. Select the TOXLINE Core radio button.

5. Use the EMIC subfile to determine whether peppermint been tested for mutagenicity. Check for English language articles. [TOXLINE Special]

   Conduct a Limits search. Select EMIC as a TOXLINE Component and English as a language from the drop down menus. Enter **peppermint** in the query box.

6. Find information on the effects of alcohol on the fetus. [DART Special and DART Core]

   Select **Both** DART Special and DART CORE. Search for **alcohol fetus** in the query box.

TOXNET Exercises (continued)

7. Search TOXLINE Core directly on PubMed to find articles on toxicological aspects of jellyfish. Search for articles published from 2000-2003 in English. [TOXLINE Core via PubMed directly].

   Go to PubMed at http://pubmed.gov. Click on **Limits**. Enter **jellyfish** in the search query box. Limit the search to the toxicology subfile, the publication dates to 2000-2004 and the language to English.

8. Find information on renal failure associated with amanita mushroom poisoning. Look for English language articles published from 1995 to 2004. [TOXLINE Special]

   Conduct a Limits search. Enter **amanita renal failure** in the query box. Restrict publication years to 1995-2003. Select English from the dropdown menu.

9. Use the HISTORY feature to look for hospital or medical waste incineration in TOXLINE Special. [TOXLINE Special]

   First search for **"hospital waste" incinerat***. (Using quotes looks for the terms together as a phrase. The asterisk is for truncation and searches for words such as incinerate, incineration, etc.) Then search for **"medical waste" incinerat***. Press the HISTORY button and combine your two searches according to the instructions, and using an "OR" operator.

TOXIC CHEMICAL RELEASES

1. How much ammonia was released to the air and water in Milwaukee in 1999?

   In TRI99, search for **ammonia** in the "chemical name" query box and for **Milwaukee/WI** in the "facility location (city/state)" query box. Click on "Search." Click the top, left button "Calculate Release."

2. How much of the above releases came from Lesaffre Yeast Corporation and in what body of water did this facility discharge ammonia?

   After above search, use the browser's "back" button to return to the "TRI Search Results" screen. Click on the Lesaffre Yeast Corporation record. Click on "Environmental Release of Chemical" in the Table of Contents. Scroll down to "Water Discharge Estimates."

TOXNET Exercises (continued)

3. What chemicals have been released to the air, in amounts greater than 100,000 pounds, over Old Hickory, Tennessee in 1995 and 1996? By what companies?

   Search for **Old Hickory Tennessee** in the "facility location (city/state)" query box. Select **greater than 100,000 pounds** for "total air release." Results page will display chemicals and companies.

4. Did Agilent Techs' Newark, California facility transfer any 1,2,4-trichlorobenzene off-site for treatment in 1996? How much? Where to?

   In TRI96, search for **1,2,4-trichlorobenzene** in the "chemical" query box, **agilent techs** in the "facility name" query box, and **newark california** in the "facility location (city/state)" query box. Click "Search." Click on "Off-Site Waste Transfer" in the Table of Contents.

5. What chemicals have been reported released in amounts over 1,000,000 pounds via underground injection in Texas in 1999, and what is the total sum of these releases.

   In TRI99, search for Texas as a state under Facility Location, and greater than 1,000,000 pounds as a range. Sorting the results will provide a clear display of the chemicals. Click on the Calculate Release button to view the sum total of the underground injection releases.

6. How many individual TRI98 reports have been filed on barium compounds? Display the U.S. geographical distribution of reported releases.

7. In TRI98, search **barium compounds** in the chemical query box. Note the number of records retrieved listed at the top of the Search Results page. Click on "Map it with TOXMAP" to view a map of releases.

TOXNET Exercises (continued)

HAZ-MAP

1. What are some high risk tasks associated with the job of carpet installation?

   Click on **High Risk Jobs/Alphabetically**. Choose the letter "C" and click on **Carpet Installers**.

2. What are some hazards associated with the use of cobalt in the workplace?

   Enter **Cobalt** in query box and click on "agent." Click on **Cobalt**. Click on **Cobalt** again to view potential hazards. For Extra Credit – highlight a term or phrase (e.g. "cobalt chloride skin allergy" and search **TOXLINE**.

3. What are some hazards of leather tanning?

   Perform a "text search" for **leather tanning** in the search query box. Click on first **leather tanning and finishing** as an Industry and then go back and click on **tanning leather** as a Process.

HOUSEHOLD PRODUCTS DATABASE

1. What is in Windex and are there any health dangers associated with it?

   Enter **Windex** in query box. Click on your choice of Windex cleaner. View ingredient and health effects information.

2. Compare the toxicities of various pesticides used to treat ants.

   Click on the "Products" tab. Click on **Pesticides**, then on **Insecticides** as a Category and **Ant** as a type. View the data on the various products.

3. What stick deodorants include the antibacterial ingredient triclosan?

   Click on Ingredients. Enter **triclosan** in query box. Click on triclosan. Scan list of products.

TOXNET Exercises (continued)

WORLD WIDE WEB

1. Explore EPA's voluminous Web site, particularly the **Databases and Software** section located by clicking on their home page's **Information Sources**. Locate IRIS, ECOTOX, the Toxics Release Inventory, and the Safe Drinking Water Information System. Use the Advanced Search box to find documents with **mercury** in the title. [**www.epa.gov**]

2. Locate a full-text article about the ban on ephedra in the March-October 2004 issue of the **FDA Consumer** magazine. [**www.fda.gov**]

3. What chemicals are on the list of "Known to be Human Carcinogens" in the National Toxicology Program's Year 2002 10th Report of Carcinogens? [**ntp-server.niehs.nih.gov**]

4. Find the Agency for Toxic Substances and Disease Registry's TOXFAQ profile on nickel. [**www.atsdr.cdc.gov**]

5. Check out the National Council for Science and the Environment's Web site and find recent Congressional Research Service (CRS) reports, under their National Library for the Environment section, on **pesticides**. [**www.ncseonline.org**]

6. Which Florida universities offer graduate programs in toxicology? Check the Society of Toxicology's Resource Guide to Careers in Toxicology (under Public Outreach/Career Resources) [**www.toxicology.org**]

7. Explore the variety of data sources containing information on acrylonitrile, by searching ChemFinder. [**www.chemfinder.com**]

8. Where and on what dates will the fourth Society of Environmental Toxicology and Chemistry's World Congress be held? [**www.setac.org**]

9. What is New Jersey's rank among states in total release hazardous air pollutants? Use Scorecard (from Environmental Defense). Start by clicking on Air/HazardousAir Pollutants. [**www.scorecard.org**]

10. Use the BIOLOG file (one of Syracuse Research Corporation's Environmental Fate Data Bases – EFDB) to find references on DDT in sewage. **[www.syrres.com/esc/efdb.htm]**

11. Find some peer-reviewed monographs on arsenic. **[www.inchem.org]**

12. What are some common side effects of the drug Vioxx? Consult MedlinePlus' Drug Information page (data from the USP). **[medlineplus.gov]**

13. Who makes Kill Zone Flea and Tick Killer 2000? What are its active ingredients? How have various governmental agencies rated the carcinogenic potential of these ingredients? [**www.pesticideinfo.org**]

14. How many poison control centers in Texas are certified by the American Association of Poison Control Centers (AAPCC)? What are their addresses? The AAPCC's Poison Center Lists includes a list of certified centers. Find the nation-wide toll-free poisoning emergency phone number. [**www.aapcc.org**]

Notes

Notes

Course Evaluation

Course Name: _____

Course Location: _____

Date(s): _____

Thank you for attending this course. Please complete this form to help us evaluate and improve our training.

Up to now, I primarily used the following sources to obtain toxicology information:
❑ NLM and TOXNET (especially the following databases: _____)
❑ Other Databases: _____
❑ Did not search much

After today I expect to primarily use the following to obtain toxicology information:
❑ NLM and TOXNET (especially the following databases: _____)
❑ Other Databases: _____
❑ Will not search much

Circle your response:

	Strongly Agree	Agree	Disagree	Strongly Di
Knowledge Gained				
I acquired the knowledge and skills necessary to search TOXNET and other NLM and non-NLM toxicology databases.	4	3	2	1
Workbook				
The workbook is a valuable aid to this course.	4	3	2	1
The instructor(s)				
The instructors are proficient at conveying information.	4	3	2	1
The instructors are patient and open to questions.	4	3	2	1

(Please turn OVER to complete evaluation.)

	Strongly Agree	Agree	Disagree	Strongly Disagree
Instructional Methods				
The course is well-paced.	4	3	2	1
The hands-on exercises are an important course component.	4	3	2	1
Course Content				
The information in this course is helpful in understanding how to search TOXNET and other NLM and non-NLM toxicology databases.	4	3	2	1
I would recommend this course to someone who will be searching for toxicology information.	4	3	2	1

Comments about this course:

Comments about databases or TOXNET Search Interface: